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ABSTRACT

Several intermediate performance objectives and corresponding criterion measures are listed for a woodworking course for seventh, eighth, and ninth grade students. The seventh grade section includes seven terminal objectives for a 9-week basic hand woodworking course which includes planning and layout, skill in the use of hand tools, construction and identification of simple joints, and the use of fasteners and finishing methods. The eighth grade section includes 11 terminal objectives in basic hand woodworking. The activities include planning and layout, design and construction, using bill of materials, and finishing procedures. Some machine work is involved also. The ninth grade section is divided into two separate one-semester courses: (1) Woods 1A is a course designed to review, reinforce, and advance knowledge of previously learned woods experience. It incorporates an introduction to machine woodworking and contains 16 terminal objectives. (2) Woods 1B is a basic machine woodworking course designed for those students who wish to take an additional semester course in woodworking. It includes a review of machines and tools with more depth in design and construction and criteria for making a vocational choice. Twenty terminal objectives are included in this section. (This manual and 54 others were developed for various secondary level vocational courses using the System Approach for Education (SAFE) guidelines.) (HD)

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JUNIOR HIGH SCHOOL

INDUSTRIAL ARTS

PERFORMANCE OBJECTIVES

ED139978

WOODS

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Duval County Public Schools
July, 1972

MAKE UP AND USE OF THIS MANUAL

Definitions

Terminal Performance Objectives - are objectives referring to a behavior, knowledge, or skill you want the learner to demonstrate at the end of a particular unit or section. They are written in gross, overall terms.

Intermediate Performance Objectives - are sub-functions of terminal objectives referring to a behavior, knowledge, or skill you want the learner to demonstrate along the way towards mastery of the terminal objectives. They are written in specific terms.

Criterion Measures - are the actual tests of evaluation exactly as it will be presented to the learner to see if he has met the objectives.

Method Media Analysis - specifically refers to personnel resources, tools, vehicles, software, and hardware media - the physical hows for implementing the methods or ways of curriculum implementation.(Each media center is different in the materials available to assist the instructor in lecturing and demonstrating. Therefore, the individual instructor must research the school's media center for the appropriate materials to be used).

Levels of Performance - The levels of performance (how well it must be done) given in this manual have been arrived at by the authors through past experiences and by consultation with other Industrial Arts teachers in Duval County. These levels are subject to change after try out. They are written as average levels of attainment that all students should achieve. This by no means limits the instructor, who can teach as far above the level as possible.

These objectives are minimal - The objectives in this manual represent the basic "need to know" knowledge and skills that should be attainable by any student that meets the prerequisites of the courses.

Courses Prerequisites - The prerequisites for these courses may need revision. For example, if your course calls for a certain skill in reading ability and you are getting students below this ability that cannot perform up to the course standards, then a prerequisite of "must be able to read at the -- level" may be needed.

* ACKNOWLEDGEMENTS *

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Mr. David A. Rigsby, Director of Vocational Education

Mr. Lowell T. Hudson, Supervisor of Industrial Arts

The following educators participated as writers of this manual.

Mr. Edwood Bunch, Joseph Stilwell Jr. High School

* Mr. Paul Goldsbury, Terry Parker Sr. High School

Mr. Dick Jones, Sandalwood Jr. - Sr. High School

Mr. George Maust, Jr., A. I. DuPont Jr. High School

* Mr. Lowell Meckley, Edward H. White Sr. High School

Mr. Wendell Scoles, Edward H. White Sr. High School

* Co-Chairman

Manual prepared by . . . . Mr. Chester Seivert, Forrest Sr. High School

Typist . . . . Anne Voutour

WOODWORKING - WOODS IA & IB

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WOODWORKING

ACCREDITATION NO. 5871

LENGTH OF COURSE: 9 WEEKS

GRADE LEVEL: 7th

PROGRAM PATH: CAREER EDUCATION, EXPLORATORY, PRE-COLLEGE

PREREQUISITE(S): 7th GRADE

COURSE DESCRIPTION:

Basic hand woodworking course to include planning and layout, skill in the use of hand tools, construction and identification of simple joints, and the use of fasteners and finishing methods.

WOODWORKING
7th GRADE

1.0 Orientation

2.0 Safety

3.0 Kinds and Uses of Woods

4.0 Hand Tools

5.0 Planning

6.0 Wood Joints and Fastening

7.0 Finishing

COURSE WOODWORKING
7th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 1.0

ORIENTATION

The learner will, with 80% accuracy, list the classroom responsibilities expected of him. The learner will also demonstrate, orally, his knowledge of the grading procedures used in this course of study.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.1	The learner will write and define the responsibilities (listed below) expected of him in the general woodworking laboratory. 1. Punctuality 2. Citizenship 3. Safety 4. Behavior 5. Good Housekeeping	1.1	Write and define five (5) areas of responsibility expected of you as a learner.
1.2	The learner will orally recall the following areas to be graded in this course of study. 1. Projects 2. Tests 3. Written Work (other than tests) 4. Daily Performance	1.2	State the four (4) areas to be considered in arriving at a final grade.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 1.0

I. P. No.	M/M No.	Method / Media Selection
1.1	1.1.1	Lecture Chalkboard
1.2	1.2.1	Lecture Chalkboard

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COURSE WOODWORKING
7th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0

SAFETY

The learner will write ten (10) of the fifteen (15) General Safety Rules of the woods laboratory, define in writing the term "Safety Consciousness", and will demonstrate his ability to follow the rules of good housekeeping in the laboratory.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.1	The learner will list fifteen (15) General Safety Rules of the woods laboratory. 1. No horseplay 2. No running in the laboratory 3. Keep your tools clean 4. Keep volatile materials in proper containers 5. Wear proper clothing 6. Keep the floor area clean 7. Wear safety equipment where required 8. Know fire drill procedures 9. Keep safety guards in place 10. Use the proper tool 11. Get instructor's permission before operating any machinery. 12. Know the location and use of all fire extinguishers. 13. Report all malfunctions or breakage to the instructor. 14. Report any injuries at once 15. Report any unsafe practices at once	2.1	Write fifteen (15) General Safety Rules from memory.
2.2	The learner will define in writing the term "Safety Consciousness" as "each individual's responsibility to protect himself and others in any and all laboratory situations."	2.2	Define in writing the term "Safety Consciousness".
2.3	The learner will demonstrate, by daily actions, his ability to follow the rules of good housekeeping. 1. Keep tools clean 2. Clean the equipment properly 3. Store all tools properly 4. Clean assigned area	2.3	You will be graded on your willingness and ability to follow the four (4) rules of good housekeeping. 1. Keep tools clean 2. Clean the equipment properly 3. Store all tools properly 4. Clean assigned area

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 2.0

I. P. No.	M/M No.	Method / Media Selection
2.1	2.1.1	Lecture Handout Sheet Film
2.2	2.2.1	Lecture
2.3	2.3.1	Lecture Demonstration

COURSE WOODWORKING
7th Grade

TERMINAL PERFORMANCE OBJECTIVE NO. 3.0

KINDS AND USES OF WOOD

With 70% proficiency, the learner will identify, visually, four (4) commonly used woods and will write the individual characteristics of each.

<table>
<tr><th>NO.</th><th>INTERMEDIATE PERFORMANCE OBJECTIVES</th><th>NO.</th><th>CRITERION MEASURES</th></tr>
<tr><td>3.1</td><td>The learner will identify orally, four (4) commonly used laboratory woods.
1. Mahogany
2. Pine
3. Poplar
4. Walnut</td><td>3.1</td><td>Identify orally the four (4) wood samples shown by your instructor.</td></tr>
<tr><td>3.2</td><td>The learner will, in writing, list the basic color and workability of the four (4) commonly used woods.
<table>
<tr><th></th><th>Name</th><th>Color</th><th>Workability (Hard, Med., Soft)</th></tr>
<tr><td>1.</td><td>Mahogany</td><td>med. red</td><td>S</td></tr>
<tr><td>2.</td><td>Pine</td><td>red-brown</td><td>S</td></tr>
<tr><td>3.</td><td>Poplar</td><td>yellow</td><td>M</td></tr>
<tr><td>4.</td><td>Walnut</td><td>brown</td><td>M</td></tr>
</table></td><td>3.2</td><td>List, in writing, the basic color and workability of the four (4) commonly used woods.</td></tr>
</table>

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 3.0

I. P. No.	M/M No.	Method / Media Selection
3.1	3.1.1	Lecture
		Samples
		Film
3.2	3.2.1	Lecture
		Text
		Examination Sheet

COURSE WOODWORKING
7th Grade

TERMINAL PERFORMANCE OBJECTIVE NO. 4.0

HAND TOOLS

With 70% accuracy, the learner will orally identify twenty (20) basic hand tools of the wood laboratory and properly demonstrate his ability to clean and store these tools.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.1	The learner will, orally, identify these twenty (20) hand tools of the woods laboratory. 1. crosscut saw 2. rip saw 3. planer (smooth) 4. chisel (wood) 5. try square 6. carpenter's square (framing) 7. back saw 8. coping saw 9. compass saw 10. T bevel 11. wood gauge 12. rasp 13. hand drill 14. auger bit 15. hammer (claw) 16. screwdriver 17. twist drill 18. wood mallet 19. cabinet file 20. brace	4.1	Orally identify the hand tools displayed by the instructor.
4.2	The learner will clean and properly store hand tools used in the woods laboratory.	4.2	You will clean and properly store all hand tools used in the woods laboratory.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 4.0

I. P. No.	M/M No.	Method / Media Selection
4.1	4.1.1	Demonstration Lecture Tool Samples Handout Sheet
4.2	4.2.1	Demonstration Lecture Observation

COURSE WOODWORKING
7th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0

PLANNING AND LAYOUT

The learner will, with 80% proficiency, demonstrate his ability to write a planning and procedure sheet. He will list the tools to be used, the procedures necessary for completion, and transfer his design on the stock supplied.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.1	The learner will write a project planning and procedure sheet, and list the correct tools necessary to follow the procedures. Attached: Sample of project planning sheet.	5.1	Fill out the project plan sheet as supplied by the instructor.
5.2	The learner will transfer the outlines of the pieces of his design to the appropriate wood stock using a PENCIL, a bench rule, a try square, a compass, other tools or templates as required.	5.2	Transfer your design to the stock as designated by the instructor.

PROJECT PLAN SHEET

Name ______________________________ Course & Period ______________

Name of project ____________________________ Date Begun ______________

Date Completed ______________ Estimated time ______________ Hrs. ____________

Actual time required ____________ Actual time ÷ Estimated time ________ % efficiency ___

Source of the idea & drawing ____

BILL OF MATERIALS

No. Of Pieces	Part Name	All Specification T x W x L Material	Cubic Inches	Board Feet	Unit Cost	Total Cost

Total Cost

STEPS OF PROCEDURE	TOOLS & MACHINES REQUIRED
1	
2	
3	
4	
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19	
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Make a detail working drawing and attach to this plan sheet

APPROVED BY ____

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 5.0

I. P. No.	M/M No.	Method / Media Selection
5.1	5.1.1	Planning Sheet Lecture Chalkboard
5.2	5.2.1	Tools and Equipment Stock Materials

COURSE WOODWORKING
7th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0

WOOD JOINING AND
FASTENING

The learner will, with 75% proficiency, demonstrate his ability to join and fasten wood stock using one (1) or more of four (4) basic methods.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
6.1	The learner will square and prepare (sand) wood stock as a preparation for joining.	6.1	Square and sand the wood stock to be joined. Follow these steps of procedure: 1. Cut pieces to approximate length. 2. Sand to proper dimensions, making sure stock is square. 3. Drill pilot holes, if needed.
6.2	The learner will identify, orally, four (4) methods of wood joining. 1. Nails 2. Screws 3. Edge joint (glued) 4. Butt joint (glued)	6.2	Orally identify the four (4) samples of basic wood joining methods shown you by your instructor.
6.3	The learner will join stock pieces to complete his project.	6.3	Decide the method to be used and join the stock pieces, following the instructor's directions and the materials supplied.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 6.0

I. P. No.	M/M No.	Method / Media Selection
6.1	6.1.1	Lecture Demonstration Film Stock
6.2	6.2.1	Lecture Demonstration Samples
6.3	6.3.1	Demonstration Tools Materials

COURSE WOODWORKING
7th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0 FINISHING

With 75% proficiency, the learner will identify given finishing materials and demonstrate his ability to properly prepare and apply a finish to a wooden surface. He will demonstrate his ability to thoroughly clean and store the tools and materials used in finishing.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.1	The learner will identify, in writing, the four (4) major steps in applying a finish to wood. 1. Sanding - preparing the surface 2. Staining - adding color and highlight 3. Sealing - wash coat sealer 4. Finish - beautifying	7.1	Using your text as a guide, define in writing the four (4) major steps in applying a finish.
7.2	The learner will properly prepare a selected or assigned project and apply a finish. 1. Sand 2. Stain 3. Seal 4. Finish	7.2	Properly sand the selected or assigned project and apply the finish with the materials issued by your instructor.
7.3	The learner will properly clean and store the tools and materials used in finishing.	7.3	Clean and store all tools and equipment used in finishing.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives 7.0

I. P. No.	M/M No.	Method / Media Selection
7.1	7.1.1	Lecture Textbook Demonstration
7.2	7.2.1	Demonstration Tools and Materials
7.3	7.3.1	Observation by Instructor Tools and Materials

WOODS

ACCREDITATION NO. 5862

LENGTH OF COURSE: 9 WEEKS

GRADE LEVEL: 8th

PROGRAM PATH: CAREER EDUCATION, EXPLORATORY, PRE-COLLEGE

PREREQUISITE(S): 8th GRADE STUDENT

COURSE DESCRIPTION:

Basic hand woodworking course. Activities include planning and layout, design and construction, using bill of materials, and finishing procedures. Some machine work is involved.

WOODWORKING
8th GRADE

1.0 Orientation

2.0 Safety

3.0 Kinds and Uses of Woods

4.0 Handtools

5.0 Planning

6.0 Wood Joints

7.0 Fastening and Assembly

8.0 Finishes

9.0 Scroll Saw

10.0 Drill Press

11.0 Wood Lathe

NOTE: This course was designed for a nine (9) week period of study. It will be the individual instructor's decision as to how extensively he covers the materials, depending on his own particular "time allotted" situation. This course was designed to follow a path from fundamental processes to an "in depth" study in sequential order. The instructor should not reverse the order in which The Terminal Performance Objectives are written, but should teach as far into each as time will permit.

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 1.0 ORIENTATION

The learner will, with 80% accuracy, list the classroom responsibilities expected of him. The learner will also demonstrate, orally, his knowledge of the grading procedures used in this course of study.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.1	The learner will write and define the responsibilities (listed below) expected of him in the general woodworking laboratory. 1. Punctuality 2. Citizenship 3. Safety 4. Behavior 5. Good Housekeeping	1.1	Write and define five (5) areas of responsibility expected of you as a learner.
1.2	The learner will orally recall the following areas to be graded in this course of study. 1. Projects 2. Tests 3. Written Work (other than tests) 4. Daily Performance	1.2	State the four (4) areas to be considered in arriving at a final grade.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective - 1.0

I. P. No.	M/M No.	Method / Media Selection
1.1	1.1.1	Lecture Chalkboard Handout Sheet
1.2	1.2.1	Lecture Chalkboard

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0 SAFETY

The learner will write ten (10) of the fifteen (15) General Safety Rules of the woods laboratory, define in writing the term "Safety Consciousness", and will demonstrate his ability to follow the rules of good housekeeping in the laboratory.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.1	The learner will list fifteen (15) General Safety Rules of the woods laboratory. 1. No horseplay 2. No running in the laboratory 3. Keep your tools clean 5. Keep volatile materials in proper containers 6. Keep the floor area clean 7. Wear safety equipment where required 8. Knowdire drill procedures 9. Keep safety guards in place 10. Get instructor.s permission before operating any machinery 11. Use thr proper tool 12. Know the location and use of all fire extinguishers 13. Report all malfunctions or breakage to the instructor 14. Report any injuries at once 15. Report any unsafe practices at once	2.1	Write fifteen (15) General Safety Rules from memory.
2.2	The learner will define in writing the term "Safety Consciousness" as "each individual's responsibility to protect himself and others in any and all laboratory situations."	2.2	Define in writing the term "Safety Consciousness"
2.3	The learner will demonstrate, by daily actions, his ability to follow the rules of good housekeeping. 1. Keep tools clean 2. Clean the equipment properly 3. Store all tools properly 4. Clean assigned area	2.3	You will be graded on your willingness and ability to follow the four (4) rules of good housekeeping. 1. Keep tools clean 2. Clean the equipment properly 3. Store all tools properly 4. Clean assigned area

METHOD / MEDIA ANALYSIS

Terminal Performance Objective - 2.0

I. P. No.	M/M No.	Method / Media Selection
2.1	2.1.1	Lecture Film Handout Sheet
2.2	2.2.1	Lecture
2.3	2.3.1	Lecture Demonstration

COURSE WOODWORKING

8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 3.0

KINDS AND USES OF
WOODS

The learner will, with 70% proficiency, by written and oral examination, identify four (4) commonly used laboratory woods. He will define the basic characteristics of each and apply these properties to practical use.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	The learner will identify orally, four (4) commonly used laboratory woods. 1) Pine 2) Poplar 3) Mahogany 4) Walnut	3.1	Identify orally the four (4) wood samples displayed by your instructor.
3.2	The learner will identify in writing the hard or soft working qualities of the four (4) commonly used laboratory woods.	3.2	On the handout sheet write the working qualities of the wood listed.
3.3	The learner will demonstrate in writing his ability to select wood through its qualities and characteristics and apply these to project construction.	3.3	For a selected or assigned project, list the wood chosen and write at least three (3) reasons for its selection.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective - 3.0

I. P. No.	M/M No.	Method / Media Selection
3.1	3.1.1	Lecture Samples Text
3.2	3.2.1	Lecture Samples Text Examination Sheet
3.3	3.3.1	Lecture Samples Text Handout Sheet

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 4.0

HAND TOOLS

The learner will, with 80% proficiency, demonstrate orally his ability to recall the proper names of twenty (20) basic hand tools and demonstrate the proper use and care of these tools.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.1	The learner will identify, orally, the twenty (20) basic hand tools of the woods laboratory. 1. crosscut saw 2. rip saw 3. smooth plane 4. wood chisel 5. try square 6. framing square 7. back saw 8. coping saw 9. bench rule 10. sliding T bevel 11. block plane 12. rasp (wood) 13. hand drill 14. auger bit 15. hammer (claw) 16. screw driver (standard) 17. twist drill 18. wood mallet 19. cabinet file 20. brace	4.1	identify orally each of the twenty (20) tools displayed by your instructor.
4.2	The learner will demonstrate his ability to use and properly care for the twenty (20) basic hand tools of the woods laboratory.	4.2	Demonstrate to the instructor the proper use and care of each of the twenty (20) hand tools.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective - 4.0

I. P. No.	M/M No.	Method / Media Selection
4.1	4.1.1	Lecture Demonstration Samples Text Film Observation
4.2	4.2.1	Demonstration Observation

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0 PLANNING

The learner will, with 80% proficiency, write a planning and steps of procedure sheet to complete a laboratory project. He will also draw a freehand sketch of his selected or assigned project.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.1	The learner will complete an instructor issued planning and steps of procedure sheet. (See attached sheet)	5.1	In writing, complete the planning sheet and steps of procedure sheet issued you.
5.2	The learner will attach a freehand sketch of his project to a planning sheet(s).	5.2	Attach a freehand sketch of your completed planning sheet(s).

PROJECT PLAN SHEET

Name ______________________ Course & Period ______________

Name of project ______________________ Date Begun ______________

Date Completed ______________ Estimated time ______________ Hrs. ______________

Actual time required ______________ Actual time ÷ Estimated time ________ % efficiency ____

Source of the idea & drawing ______________________________________

BILL OF MATERIALS

No. Of Pieces	Part Name	All Specification T x W x L Material	Cubic Inches	Board Feet	Unit Cost	Total Cost

Total Cost

STEPS OF PROCEDURE	TOOLS & MACHINES REQUIRED
1	
2	
3	
4	
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Make a detail working drawing and attach to this plan sheet

APPROVED BY ______________________________

METHOD / MEDIA ANALYSIS

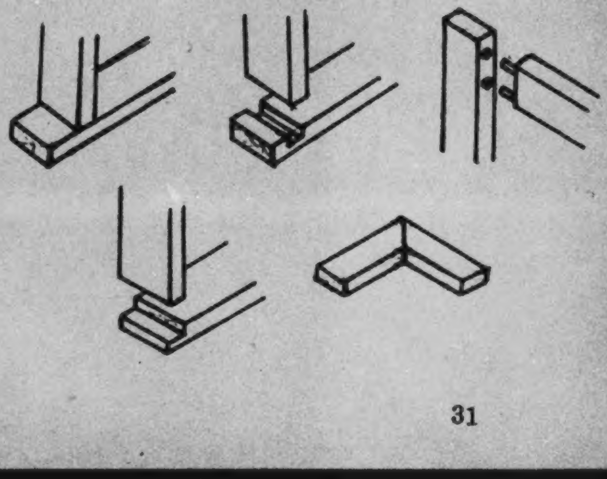
Terminal Performance Objectives - 5.0

I. P. No.	M/M No.	Method / Media Selection
5.1	5.1.1	Lecture Demonstration Chalkboard Text Planning Sheet
5.2	5.2.1	Lecture Materials Handout Sheet

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0 WOOD JOINTS

With a proficiency of 80%, the learner will correctly identify five (5) wood joints, tell their use, and construct a project using two (2) of these joints.

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
.1	From pictures supplied by the instructor, the learner will, in writing, correctly name five (5) wood joints. 1. Butt 2. Rabbet 3. Dowell 4. Dado 5. Miter	6.1	On the handout sheet write the name below the joint pictured.
6.2	Given the previous list of five (5) joints, the learner will write a use for four (4) of them.	6.2	Write a use for four (4) of the wood joints pictured.
.3	Using two (2) of the five (5) joints, the learner will construct an assigned project.	6.3	Construct a project assigned to you by the instructor using two (2) of the five (5) given joints. 

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 6.0

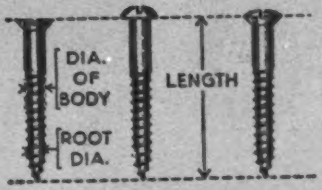
I. P. No.	M/M No.	Method / Media Selection
6.1	6.1.1	Lecture Demonstration Film Text Instruction Handout Sheet
6.2	6.2.1	Demonstration Handout Sheet
6.3	6.3.1	Demonstration Planning Sheet Materials Tools and Equipment

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0

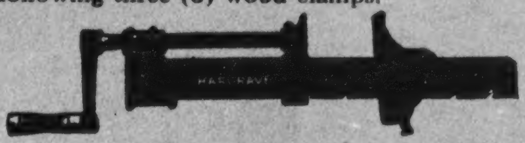
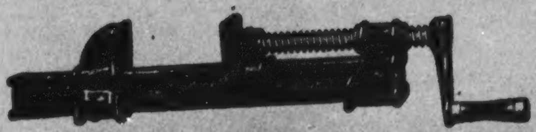
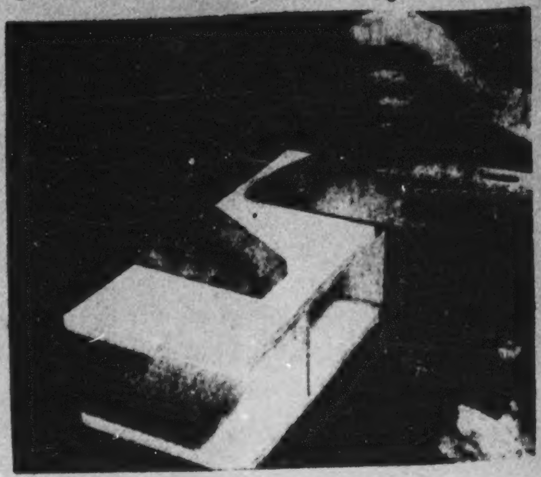
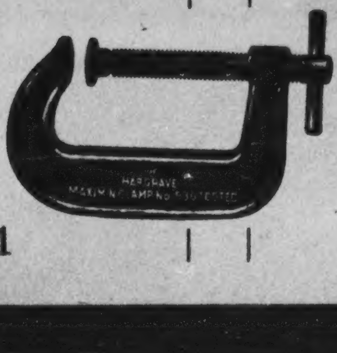
FASTENING AND ASSEMBLY

The learner, with 80% proficiency, will identify orally or in writing, different fastening hardware, glues, and clamps used in the wood laboratory.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.1	The learner will identify, orally, three (3) common screwhead shapes. 1. Flathead 2. Roundhead 3. Oval head FLAT-HEAD ROUND-HEAD OVAL HEAD	7.1	Identify, in writing, the correct name of the following wood screws. 
7.2	The learner will identify, orally, three (3) standard types of nails. 1. Common 2. Finishing 3. Brad	7.2	Identify, in writing, the correct name of the following standard nails.
7.3	The learner will identify on paper, the two (2) most common types of wood glue.	7.3	In the space provided, match column one with column two.

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0 cont'd. FASTENING AND ASSEMBLY

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		7.3	Plastic Resin Glue — 1. Comes prepared, dries fast. White Glue — 2. Powder form, dries slow.
7.4	The learner will identify orally three (3) basic types of wood clamps. 1. Bar Clamp 2. Wood Hand Screw 3. "C" Clamp	7.4	Identify orally the correct name of the following three (3) wood clamps.    

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 7.0

I. P. No.	**M/M No.**	**Method / Media Selection**
7.1	7.1.1	**Lecture** **Text** **Samples** **Handout Sheet**
7.2	7.2.1	**Lecture** **Text** **Samples** **Handout Sheet**
7.3	7.3.1	**Lecture** **Material** **Examination Sheet**
7.4	7.4.1	**Demonstration** **Tools and Equipment**

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 8.0

FINISHES

The learner will, with 80% proficiency, prepare a wood surface and apply the desired finish.

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
.1	The learner will define orally the definition of a finish. Finishes: applied to wood to protect and beautify the surface.	8.1	Define, orally, the term Finish.
8.2	The learner will define, in writing, the four (4) major steps to be followed in applying a finish to wood. 1. Staining - coloring 2. Filling - fills the grain 3. Sealing - prevents bleeding of stain 4. Finish Coat - protects and beautifies	8.2	Define, in writing, the four (4) major steps to be followed in applying a finish.
.3	The learner will apply selected finish to wood and demonstrate his ability to clean and care for the tools and materials involved.	8.3	Apply the desired finish to an assigned or selected wood project and properly clean and store materials and tools used.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective - 8.0

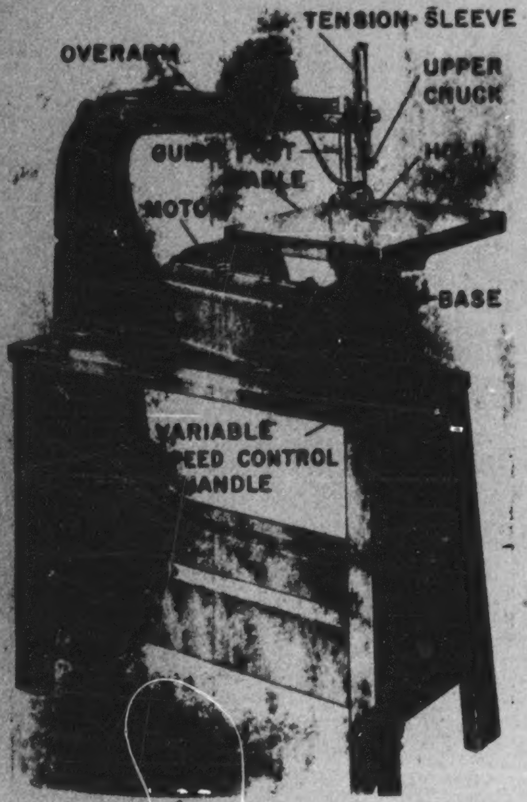
I. P. No.	M/M No.	Method / Media Selection
8.1	8.1.1	Lecture
8.2	8.2.1	Lecture Materials Handout Sheet
8.3	8.3.1	Lecture Demonstration Tools and Equipment Materials

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 9.0

SCROLL SAW

With 70% proficiency, the learner will demonstrate orally his ability to name the basic parts of a scroll (jig) saw and will demonstrate the proper set up and safe operation of this saw.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
9.1	The learner will orally identify the major parts of a scroll (jig) saw.  TENSION SLEEVE OVERARM UPPER CHUCK GUIDE POST TABLE HOLD DOWN MOTOR BASE VARIABLE SPEED CONTROL HANDLE	9.1	Orally identify the major parts of the scroll saw. 1. Overarm 2. Stand 3. Speed Control Handle 4. Motor 5. Table 6. Hold down 7. Guide Post 8. Base 9. Chuck 10. Tension Sleeve

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 9.0 cont'd.

SCROLL SAW

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
9.2	The learner will demonstrate the proper operation of the scroll saw by cutting (for assembly) a selected or assigned project.	9.2	Cut a selected or assigned project on the scroll saw. Follow these instructions: 1. Adjust the guide so that the small spring tension holds the stock firmly against the table. 2. Hold piece with thumb and forefinger of both hands. 3. Apply even forward pressure. 4. Feed the stock into the blade slowly. 5. Turn material slowly when cutting a curve. 6. Plan your cutting carefully. 7. Wear safety goggles.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 9.0

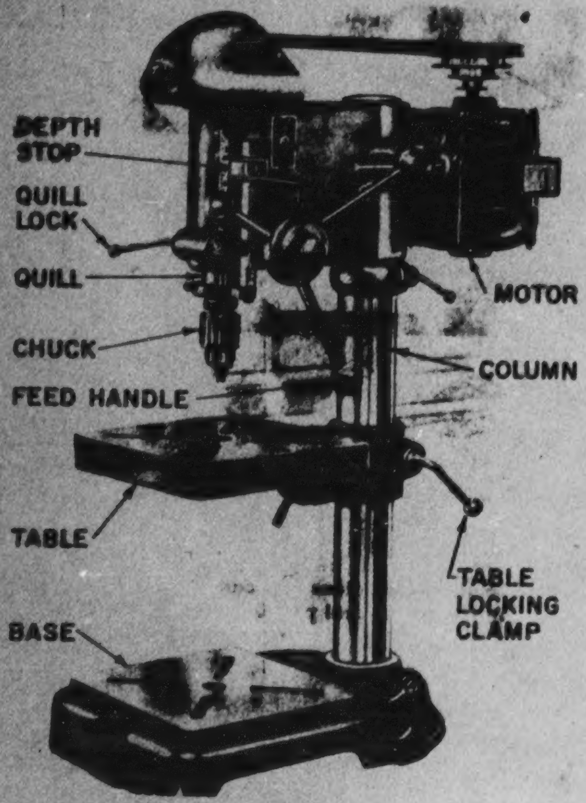
I. P. No.	M/M No.	Method / Media Selection
9.1	9.1.1	Lecture Demonstration Equipment
9.2	9.2.1	Assignment or selected project Demonstration Safety Lecture Observation

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 10.0

DRILL PRESS

With 70% proficiency, the learner will identify, orally, the basic parts of a drill press and will demonstrate his ability to set up and safely operate this press.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
10.1	The learner will orally identify the major parts of a drill press.  DEPTH STOP QUILL LOCK QUILL CHUCK FEED HANDLE TABLE BASE MOTOR COLUMN TABLE LOCKING CLAMP	10.1	Orally identify the major parts of a drill press . 1. Base 2. Table Locking Clamp 3. Column 4. Motor 5. Depth Stop 6. Quill Lock 7. Quill 8. Chuck 9. Feed Handle 10. Table

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 10.0 cont'd. DRILL PRESS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
10.2	The learner will demonstrate his ability to set up and properly operate a drill press to complete a selected or assigned project.	10.2	Properly set up and operate the drill press to complete an assigned or selected project. Follow these instructions: 1. Locate and punch hole center 2. Select the correct size drill 3. Fasten drill in chuck 4. Adjust speed - (slower for larger drill) 5. Adjust the table height 6. Place the scrap under the stock 7. Clamp the work piece securely 8. Wear eye protection 9. Feed with slow pressure

METHOD / MEDIA ANALYSIS

Terminal Performance Objective - 10.0

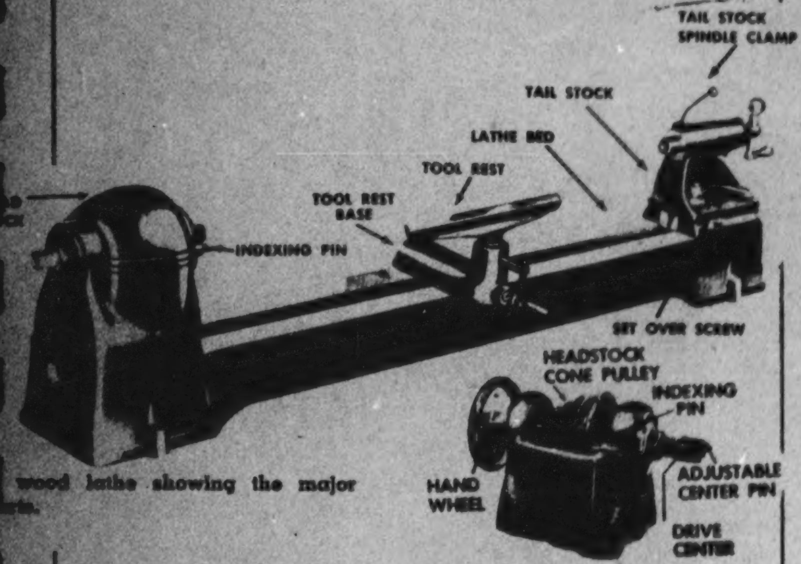
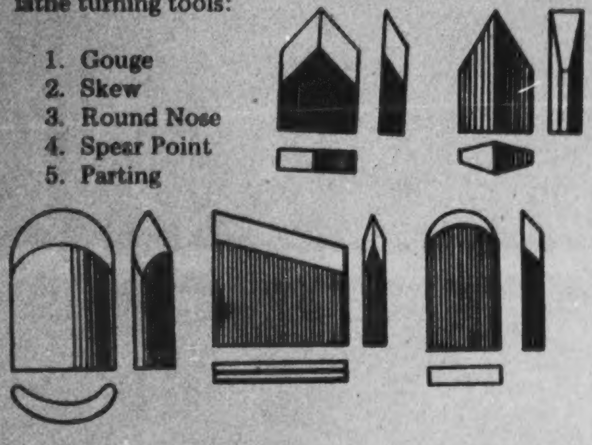
I. P. No.	M/M No.	Method / Media Selection
10.1	10.1.1	Lecture
		Demonstration
		Film
		Text
		Equipment
		Observation
10.2	10.2.1	Demonstration
		Tools and Equipment
		Materials
		Instruction Sheet

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0

WOOD LATHE

With 70% proficiency, the learner will recall orally the basic parts of a wood lathe, identify the basic cutting tools involved, and demonstrate his ability to safely and properly turn a cylinder, taper, concave, convex, bead and cove.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
11.1	Identify orally the basic parts of a wood lathe.  TAIL STOCK SPINDLE CLAMP TAIL STOCK LATHE BED TOOL REST TOOL REST BASE INDEXING PIN SET OVER SCREW HEADSTOCK CONE PULLEY INDEXING PIN ADJUSTABLE CENTER PIN HAND WHEEL DRIVE CENTER wood lathe showing the major	11.1	Orally identify the basic parts of a wood lathe. 1. Tail Stock 2. Bed 3. Tool Rest 4. Indexing Pin 5. Head Stock 6. Cone Pulley 7. Hand Wheel 8. Center Pin 9. Drive Center 10. Set-over Screw
11.2	The learner will orally identify these five (5) basic wood lathe turning tools: 1. Gouge 2. Skew 3. Round Nose 4. Spear Point 5. Parting 	11.2	Identify orally the five (5) wood lathe turning tools displayed by the instructor.

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0 cont'd. WOOD LATHE

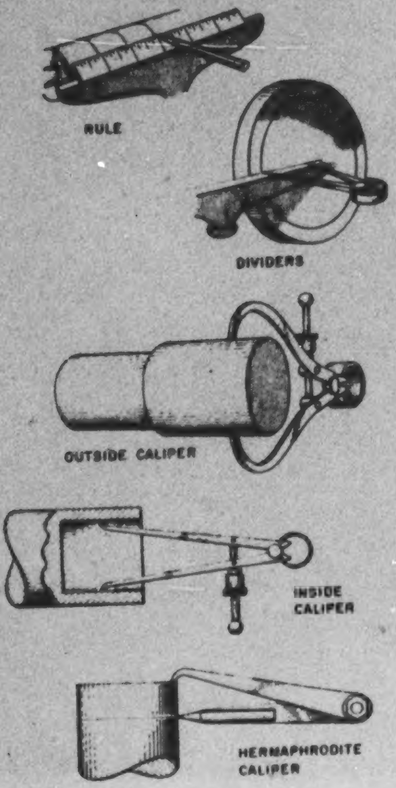
O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
11.3	The learner will identify, in writing, the fourteen (14) basic safety rules of operating a wood lathe. 1. Get permission before starting lathe 2. Maintain proper belt tension 3. Keep spinhole and tail stock centers clean 4. Check stock for splits and nails 5. Lubricate tail stock center points 6. Be sure tail stock is locked 7. Never lock the pulley with the index pin 8. Keep the tool slide and rest locked 9. Never adjust tool rest when lathe is running 10. Hold chisels firmly 11. Remove the tool rest before sanding 12. Keep tools sharp 13. Wear goggles or face shield 14. Keep the ways clean	11.3	List, in writing, the fourteen (14) safety rules of wood lathe.

COURSE WOODWORKING

8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0 cont'd.

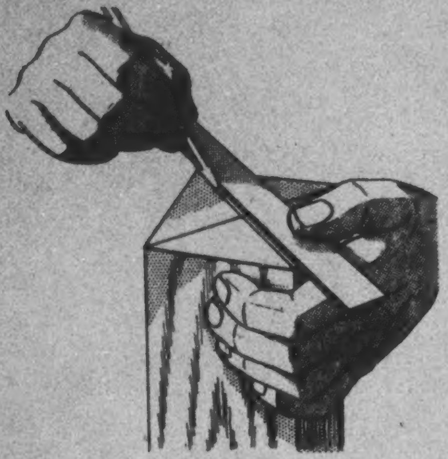
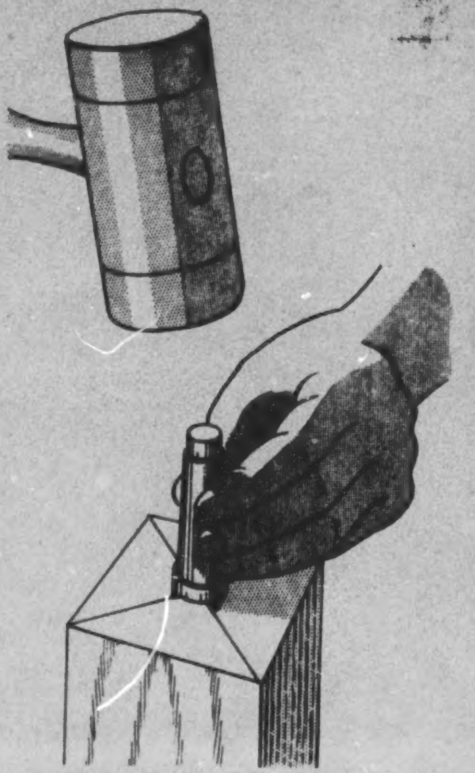
WOOD LATHE

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.4	The learner will identify, orally, five (5) hand tools used for measuring wood stock on the wood lathe. Tools needed for measuring.  RULE DIVIDERS OUTSIDE CALIPER INSIDE CALIPER HERMAPHRODITE CALIPER	11.4	Identify, orally, the five (5) measuring tools shown you by your instructor. 1. Bench rule 2. Dividers 3. Outside caliper 4. Inside calipers 5. Hermaphrodite calipers

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0 cont'd.

WOOD LATHE

INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
The learner will prepare stock for turning on the lathe for an assigned or selected finished project and lock the stock in the lathe.  Here a line is being drawn across the corners to locate the center of the stock.	11.5	Prepare the stock to be turned by locating the centers and setting the spur and locking the stock in the lathe. One method of setting a spur or live center is to drive it into the wood with a mallet. 

COURSE WOODWORKING
8th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0 cont'd.
WOOD LATHE

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
.6	The learner will properly turn a selected or assigned project using the proper tools for common cuts and following the basic rules of safe operation.	11.6	Select the proper tools and safely turn and sand the project.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective - 11.0

I. P. No.	M/M No.	Method / Media Selection
11.1	11.1.1	Lecture Demonstration Equipment Film Text Observation
11.2	11.2.1	Demonstration Tools Observation
11.3	11.3.1	Lecture Demonstration Handout Sheet Film Examination Sheet
11.4	11.4.1	Lecture Demonstration Tools and Materials Observation
11.5	11.5.1	Lecture Demonstration

METHOD / MEDIA ANALYSIS

Terminal Performance Objective - 11.0 cont'd.

I. P. No.	M/M No.	Method / Media Selection
11.5	11.5.1	Tools and Equipment Materials
11.6	11.6.1	Lecture Demonstration Tools and Equipment Film Text Materials

WOODS IA

ACCREDITATION NO. 5873A

LENGTH OF COURSE: 1 SEMESTER

GRADE LEVEL: 9th

PROGRAM PATH: CAREER EDUCATION, PRE-TECHNICAL, PRE-COLLEGE

PREREQUISITE(S): 7th OR 8th GRADE WOODS

COURSE DESCRIPTION:

A course designed to review, reinforce, and advance knowledge of previously learned woods experiences. It incorporates an introduction to machine woodworking.

WOODS IA
9th GRADE

1.0 Orientation

2.0 Safety

3.0 Occupations

4.0 Kinds and Uses of Woods

5.0 Hand Tools

6.0 Wood Joints

7.0 Fastening and Assembly

8.0 Finishes and Finishing

9.0 Planning

10.0 Design

11.0 Scroll Saw

12.0 Drill Press

13.0 Planer

14.0 Jointer

15.0 Circular Saw

16.0 Portable Sanders

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 1.0

ORIENTATION

The learner will demonstrate through practical application and written examination, his ability to understand the responsibilities expected of him in the woods laboratory and the areas in which he will be evaluated. A proficiency of 80% is expected of the learner.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.1	The learner will define in writing the responsibilities expected of him in woodworking. 1. Punctuality 2. Citizenship 3. Safety 4. Attitude 5. Behavior 6. Good Housekeeping	1.1	List, in writing, the six (6) areas of responsibility that will be followed in the woods laboratory.
1.2	The learner will orally demonstrate his ability to arrive at a period grade, using the following evaluation criteria and the assigned percentages. 1. Projects .... 40% 2. Tests .... 20% 3. Notebook .... 20% 4. Daily Performance and Attitude 20%	1.2	On the examination sheet issued by your instructor, add the percentages assigned to the areas of evaluation listed.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 1.0

I. P. No.	M/M No.	Method / Media Selection
1.1	1.1.1	Lecture Chalkboard Examination Sheet
1.2	1.2.1	Lecture Chalkboard

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0

SAFETY (GENERAL)

The learner will demonstrate, by practice and examination, his ability to understand proper safety procedures in the woods laboratory, with a proficiency of 100%.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
.1	The learner will identify in writing the proper general safety procedures used in the woodworking laboratory from a list provided by the instructor. 1. Report immediately to your work station 2. Respect the rights of others in your class 3. Accept your share of responsibility 4. Report damaged or missing tools to your instructor. 5. Follow instructions 6. Be courteous to classmates 7. Obtain permission prior to using tools, machines, or materials 8. Report all accidents, no matter how slight 9. Know and follow proper fire rules and regulations 10. Wear eye protection when using machines 11. Keep tools sharp and in good working order 12. No horseplay in the laboratory 13. Dress properly - no loose clothing 14. Remove all jewelry 15. Select proper size and type of tool for the job 16. Keep your work area clean and in order	2.1	Identify, in writing, the twenty (20) general safety procedures that will be followed while working in the woodworking laboratory.

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0 cont'd.

SAFETY (GENERAL)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
	17. Lift heavy objects with your leg muscles to avoid back and stomach injuries 18. Store and stack materials carefully 19. Keep hands clean and free of oil or grease 20. Check portable electric tools for bad cords, plugs, or switches		
2.2	The learner, given a list of general safety procedures, will demonstrate, by daily actions, his ability to follow these procedures.	2.2	You will demonstrate, by daily actions, your ability to follow the general safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 2.0

I. P. No.	M/M No.	Method / Media Selection
2.1	2.1.1	Lecture Demonstration Examination Sheet
2.2	2.2.1	Lecture Observation

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE OBJECTIVE NO. 3.0

OCCUPATIONS

The learner will demonstrate in writing, with a proficiency of 80%, his ability to comprehend various occupational opportunities available in the wood or related wood industry.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	The learner will identify, in writing, four (4) skilled occupations of the wood industry. 1. Cabinet maker 2. Millman 3. Finish Carpenter 4. Wood pattern maker	3.1	List four (4) skilled occupations of the wood industry.
3.2	The learner will write a research paper, of two-hundred (200) words, on the advantages and disadvantages of one of the skilled occupations in the wood industry.	3.2	From your listing of skilled occupations in the wood industry, use textbooks or other media material available to write a two-hundred (200) word paper on one of these occupations and include the advantages and disadvantages of the occupation.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 3.0

I. P. No.	M/M No.	Method / Media Selection
3.1	3.1.1	Lecture
		Text
		Handout Sheet
3.2	3.2.1	Text Book
		Media Center
		Examination Sheet

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 4.0

KINDS & USES OF WOODS

The learner will, with 70% proficiency, identify in writing, the eight (8) commonly used woods of the laboratory and list the working characteristics of each.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.1	The learner, in writing, will identify samples of eight (8) commonly used woods in the woodworking laboratory. 1. Walnut 2. Mahogany 3. Poplar 4. Maple 5. Oak 6. Pine 7. Cherry 8. Pecan	4.1	Properly identify in writing the common names of the wood samples displayed by the instructor.
4.2	The learner will identify, in writing, the working qualities of the eight (8) common used woods previously listed.	4.2	From the list of eight (8) commonly used woods, identify, in writing, the working qualities of each as to hard or soft.
4.3	The learner will on paper, give a description of the manufacturing process of plywood.	4.3	Using your text or other media material, write a two-hundred-fifty (250) word description of the manufacturing process of plywood.
4.4	The learner will demonstrate in writing, his ability to name four (4) by-products of the wood industry. 1. Paper 2. Alcohol 3. Cellulose 4. Wall Board	4.4	Using your text or other media material, write a short paragraph on four (4) wood by-products.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 4.0

I. P. No.	M/M No.	Method / Media Selection
4.1	4..1.1	Demonstration Wood Samples Examination Sheet
4.2	4.2.1	Examination Sheet Demonstration Lecture
4.3	4.3.1	Text Examination Sheet
4.4	4.4.1	Text Media Materials Examination Sheet

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0 HANDTOOLS

The learner will demonstrate his ability to identify the proper name, safe use, and care of the common handtools used in the woodworking laboratory with a proficiency of 80%.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.1	The learner will identify, in writing, the correct name of thirty-five (35) handtools used in woodworking. 1. hand crosscut saw 2. hand rip saw 3. back saw 4. dovetail saw 5. keyhole saw 6. compass saw 7. coping saw 8. miter saw 9. wood mallet 10. claw hammer 11. sliding "T" bevel 12. screwdriver (standard tip) 13. block plane 14. smooth plane 15. try square 16. framing square 17. wood chisel 18. wood rasp 19. cabinet file 20. hand drill 21. brace 22. twist drill 23. auger bit 24. spoke shave 25. draw knife 26. cabinet scraper 27. doweling jig 28. plug cutter 29. screwdriver bit 30. countersink bit 31. bench rule 32. marking gauge 33. file card 34. scratch awl 35. nail set	5.1	Correctly identify, in writing, the proper name of the tools as displayed by the instructor.

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0 cont'd. HANDTOOLS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.2	The learner, through performance, will demonstrate his ability to safely use and care for the handtools necessary in the construction of a project.	5.2	Demonstrate to the instructor, by performance, your ability to safely use and care for handtools.

METHOD / MEDIA ANALYSIS

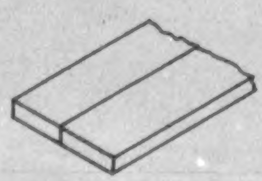
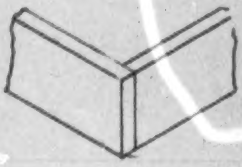
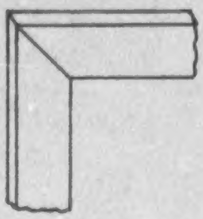
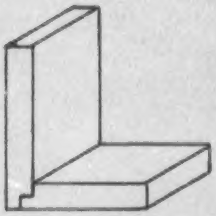
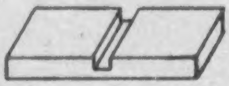
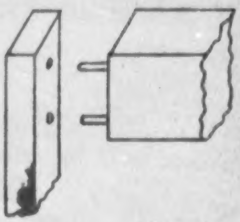
Terminal Performance Objectives - 5.0

I. P. No.	M/M No.	Method / Media Selection
5.1	5.1.1	Lecture Demonstration Text Tool Examples
5.2	5.2.1	Lecture Demonstration Observation

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0 WOOD- JOINTS

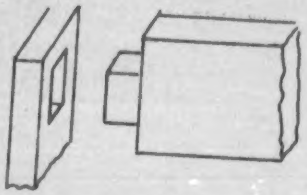
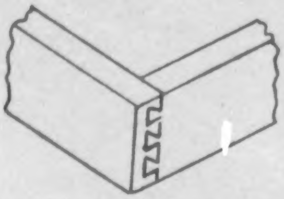
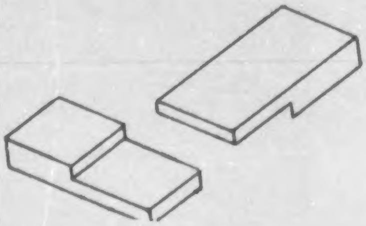
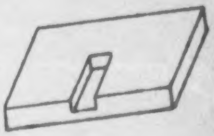
With a proficiency of 80%, the learner will orally give [illegible] use and [illegible] two (2) or more of the listed joints in a selected or assigned project.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
6.1	From pictures supplied by the instructor write the proper name for each joint.	6.1	Match the proper name to the illustrated joint. 1. Butt 2. Dado 3. Dowell 4. Rabbet 5. Miter 6. Dovetail 7. Blind Dado 8. Mortise and Tension 9. Lap 10. Edge      

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0 cont'd.

WOOD JOINTS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
			   
6.2	Given a list of the preceeding ten (10) joints, the learner will write a use for eight (8) of them.	6.2	From the given list, write a use for any eight (8) wood joints.
6.3	The learner will construct a project incorporating two (2) or more of the preceeding ten (10) given wood joints.	6.3	Construct a project using two (2) or more wood joints.

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0 cont'd.

WOOD JOINTS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		6.3	

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METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 6.0

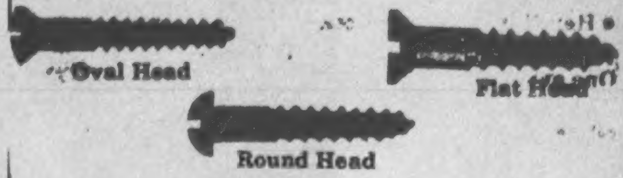
I. P. No.	M/M No.	Method / Media Selection
6.1	6.1.1	Illustration Sheet
		Text
6.2	6.2.1	Text
		Demonstration
		Examination Sheet
6.3	6.3.1	Assignment
		Planning Sheet
		Tools & Materials

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0

FASTENING & ASSEMBLY

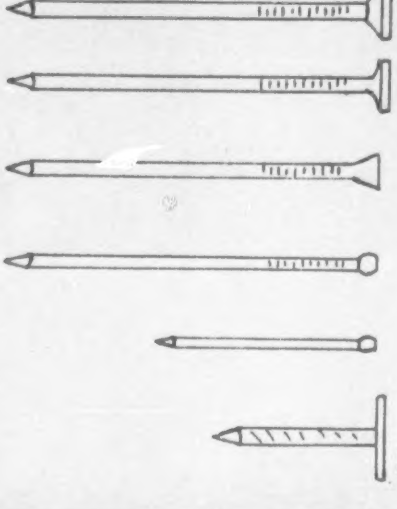
With a proficiency of 80%, the learner will identify in writing or orally, different fastening hardware, adhesive, and clamping devises used in the woodworking laboratory.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.1	The learner will identify, orally, the three (3) common head shapes of wood screws. 1. Flathead 2. Roundhead 3. Oval head	7.1	Orally identify the head shapes of the three (3) wood screws displayed by the instructor. 
7.2	The learner will identify, orally, six (6) standard types of nails. 1. Common 2. Box 3. Casing 4. Finishing 5. Brad 6. Roofing	7.2	Orally identify the six (6) standard nail types displayed by the instructor.

COURSE WOODS IA
9th Grade

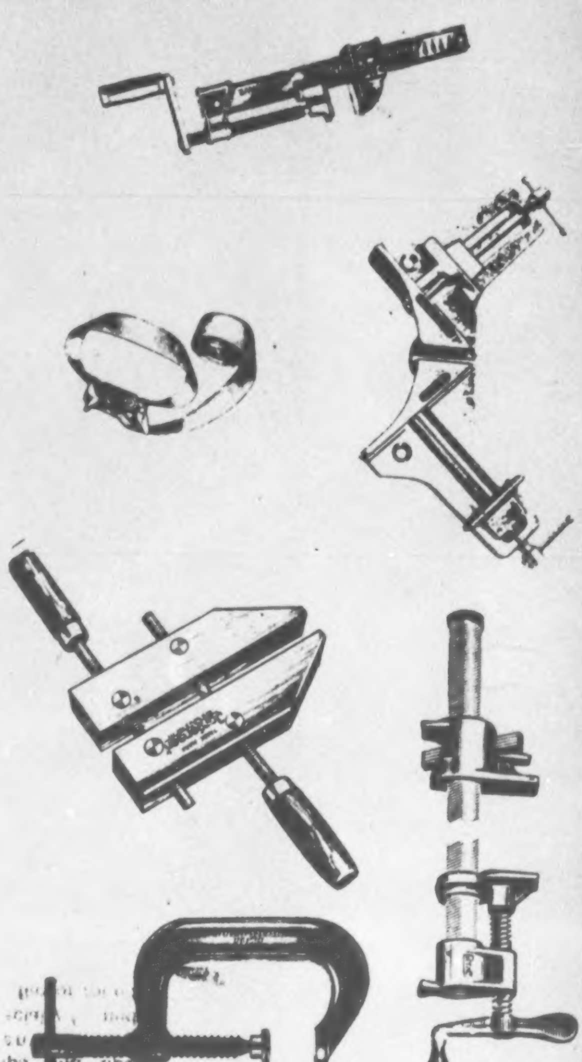
TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0 cont'd.

FASTENING AND ASSEMBLY

<table>
<tr><th>NO.</th><th>INTERMEDIATE PERFORMANCE OBJECTIVES</th><th>NO.</th><th>CRITERION MEASURES</th></tr>
<tr><td>7.3</td><td>The learner will identify, by written examination, four (4) common types of wood glues.
1. Polyvinyl Resin
2. Contact
3. Plastic Resin
4. Resorcinol Resin</td><td>7.3</td><td>Match the number and letter from columns two (2) and three (3) to column one.
<table>
<tr><td>Polyvinyl Resin</td><td>1. Mix powder and water</td><td>A. Plastic Laminat ing.</td></tr>
<tr><td>Contact</td><td>2. Mix two components</td><td>B. Moistur Resistan</td></tr>
<tr><td>Plastic Resin</td><td>3. Ready to use</td><td>C. Water-proof</td></tr>
<tr><td>Resorcinol</td><td>4. Flammable</td><td>D. Sets rapidly, Dries clear</td></tr>
</table></td></tr>
<tr><td>7.4</td><td>The learner will orally identify the following six (6) types of wood clamping devises as illustrated on a handout sheet.
1. Bar clamp
2. Wood handscrew
3. "C" clamp
4. Pipe clamp
5. Webbing clamp
6. Miter clamp</td><td>7.4</td><td>Orally identify the correct names of the following six (6) types of wood clamping devises as shown on the attached sheet.
</td></tr>
</table>

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0 cont'd. FASTENING AND ASSEMBLY

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		7.4	

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 7.0

I. P. No.	M/M No.	Method / Media Selection
7.1	7.1.1	Lecture
		Text
		Chalkboard
		Screw Samples
7.2	7.2.1	Lecture
		Text
		Chalkboard
		Nails Samples
7.3	7.3.1	Lecture
		Demonstration
		Text
		Examination Sheet
7.4	7.4.1	Demonstration
		Sample Clamp
		Text
		Examination handout Sheet

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 8.0

FINISHING AND FINISHES

W[illegible] the learner will orally or in writing state five (5) major steps in fin[illegible] materials and their solvents, identify three (3) common typ[illegible] origin, and [illegible] finish to a wood project.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
8.1	The learner will orally state five (5) major steps in finishing a woodwork project. 1. Sand - smooth surface 2. Stain - adding color 3. Seal - prevent color bleeding 4. Fill - closing the grain 5. Finish - project and beautify	8.1	Orally state and define, in order, five (5) major steps in finishing a wood project.
8.2	The learner will, in writing, identify the three (3) most common types of abrasive materials and their origin. 1. Flint (natural) 2. Garnet (natural) 3. Aluminum (manufactured)	8.2	Identify, in writing, the three (3) most common abrasive materials used on woods and tell their origin. (Natural or manufactured).
8.3	The learner will orally identify four (4) finishing materials and the correct solvent for each. 1. Varnish - turpentine 2. Lacquer - lacquer thinner 3. Shellac - denatured alcohol 4. Penetrating - mineral spirits	8.3	Orally identify four (4) finishing materials and their proper solvent.
8.4	The learner will apply a selected finish to wood and demonstrate his ability to clean and care for the tools and materials involved.	8.4	Apply the proper desired finish to your wood and demonstrate by performance, your ability to clean and store the tools and materials involved.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 8.0

I. P. No.	M/M No.	Method / Media Selection
8.1	8.1.1	Text Lecture Demonstration Example
8.2	8.2.1	Demonstration Samples
8.3	8.3.1	Lecture Samples
8.4	8.4.1	Demonstration Tools & Materials Observation

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 9.0 PLANNING

The learner will, with 80% proficiency, interpret and follow the correct procedures for completing a project plan sheet. This sheet will include bill of materials, plan of procedures, and tools and machines required.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
9.1	From a sketch or drawing, the learner will compute the number of board feet necessary to construct his project using the following formula: $BF = \frac{\text{No. Pcs.} \times T \times W \times L}{1 \times 12 \times 12}$	9.1	With a sketch or drawing of your project, compute the number of board feet needed to construct your project.
9.2	The learner will complete the bill of materials section of the plan sheet. (See attachment.)	9.2	On the plan sheet, complete the section on bill of materials including number of pieces, sizes, board feet, and cost.
9.3	The learner will complete the plan of procedure section of the plan sheet.	9.3	On the plan of procedure section of the plan sheet, complete in chronological order the steps necessary to construct your project.
9.4	The learner will complete the tools and machines section of the plan sheet.	9.4	List, in order of the plan of procedure, the tools and machines necessary to construct your project.

PROJECT PLAN SHEET

Name ------------------------------------ Course & Period ---------------
Name of project ------------------------------ Date Begun ----------------------
Date Completed --------------Estimated time -------------------Hrs.-----------
Actual time required ----------- Actual time ÷ Estimated time ------- % efficiency ---
Source of the idea & drawing --

BILL OF MATERIALS

No. Of Pieces	Part Name	All Specification T x W x L Material	Cubic Inches	Board Feet	Unit Cost	Total Cost
					Total Cost	

STEPS OF PROCEDURE	TOOLS & MACHINES REQUIRED
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Make a detail working drawing and attach to this plan sheet

APPROVED BY ------------------------------------

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 9.0

I. P. No.	M/M No.	Method / Media Selection
9.1	9.1.1	Lecture
		Selected or Assigned project drawing
9.2	9.2.1	Lecture
		Planning Sheet
		Cost Sheet
9.3	9.3.1	Plan of Procedure Sheet
		Text
		Demonstration
9.4	9.4.1	Text
		Plan of Procedure Sheet
		Demonstration

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 10.0 DESIGN

The learner will demonstrate, by practice and examination, his ability to understand and follow proper design procedures in woods, with a proficiency of 75%.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
10.1	The learner will state and define, orally, four (4) fundamentals of good design in woodworking. 1. Function - what will it be used for? Function determines form. 2. Appearance - it must be pleasant to the user. 3. Materials - the proper type of wood for use and style. 4. Construction - logical construction for function, durability, and economy.	10.1	Correctly state and define (orally) four (4) fundamentals of design in woodworking.
10.2	The learner will orally state and define five (5) common principles of design. 1. Proportion - ratio of one part to another. Example: Golden mean rectangle (2-3, 3-5, 5-8). 2. Balance - two form; formal (symmetrical) and informal (asymmetrical). 3. Rythm - repetition of shape, color, line, or design details. 4. Harmony -or Unity - the way different parts go together. 5. Emphasis - focusing on a point of attraction or special interest.	10.2	Orally state and define five (5) common principles of design.
10.3	The learner, through performance, will demonstrate his ability to incorporate proper design procedures into a wood project.	10.3	You will, as observed by the instructor, prove your ability to follow approved design procedures in the woodwork laboratory.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 10.0

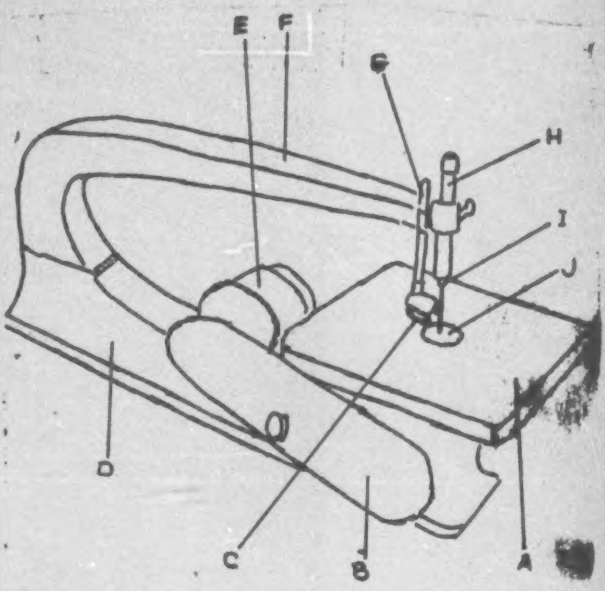
I. P. No.	M/M No.	Method / Media Selection
10.1	10.1.1	Text
		Media Center
		Demonstration
		Lecture
10.2	10.2.1	Text
		Media Center
		Lecture
10.3	10.3.1	Lecture
		Text
		Observation

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0

SCROLL SAW

The learner, with 80% proficiency, will demonstrate in writing or orally, his ability to name parts of the scroll saw and prove through observation and performance, proper and safe operation of the saw.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
11.1	Given a diagram, the learner will, in writing, identify ten (10) parts of the scroll saw. 1. overarm 2. motor 3. table 4. belt guard 5. hold down 6. guide post 7. base 8. chuck 9. tension sleeve 10. table insert	11.1	Identify, in writing, ten (10) parts of the scroll saw from the diagram given you by the instructor. 
11.2	The learner will identify, in writing, the proper safety rules of the scroll saw from a list provided by the instructor. 1. Remove rings and other jewelry 2. Hold down spring should be on top of the stock 3. Wear eye protection at all times 4. Stand clear when turning on saw 5. Only operator starts and stops machine	11.2	Identify, in writing, the ten (10) safety rules to follow when operating a scroll saw.

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0 cont'd.

SCROLL SAW

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
11.2	6. Hand holding stock should be to the sides of the blade. 7. Turn off machine to remove small scraps of wood. 8. Machine should never be left running when not in use. 9. Only operator should be inside safety zone. 10. Obtain instructor's permission prior to operating saw.		
11.3	The learner, given a list of scroll saw safety procedures, will demonstrate, by observation and practice, his ability to follow these rules correctly.	11.3	You will, as observed by the instructor, prove your ability to follow the scroll saw safety procedures.

METHOD / MEDIA ANALYSIS

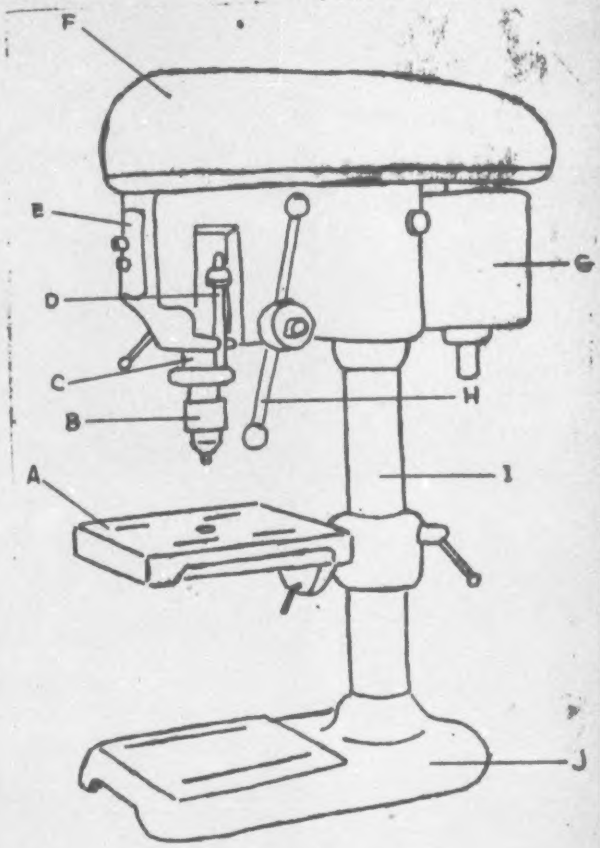
Terminal Performance Objectives - 11.0

I. P. No.	M/M No.	Method / Media Selection
11.1	11.1.1	Demonstration Text Diagram handout sheet
11.2	11.2.1	Text Demonstration Handout sheet
11.3	11.3.1	Handout sheet (Safety rules) Text

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 12.0 DRILL PRESS

The learner will, with 80% proficiency, demonstrate in writing or orally, his ability to name the parts of the drill press and further prove through observation and performance, proper and safe operation of the drill press.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
12.1	Given a diagram, the learner will identify, in writing, ten (10) parts of the drill press. 1. base 2. column 3. table 4. chuck 5. quill 6. depth stop 7. motor 8. feed handle 9. switch 10. belt guard	12.1	Identify, in writing, ten (10) parts of the drill press on the diagram given you by the instructor. 

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 12.0 cont'd. DRILL PRESS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
12.2	In writing, list the six (6) basic safety rules of operating a drill press. 1. Keep drill bits sharp 2. Wear eye protection 3. Clamp work securely 4. Do not remove chips with your hands 5. Select the proper feed 6. Use steady pressure on the feed. Do not force the tool.	12.2	Using the bit issued and stock supplied by the instructor, properly drill the hole utilizing all safety rules.
12.3	The learner, given a list of the drill press safety procedures, will demonstrate by observation and practice, his ability to follow these procedures.	12.3	You will, as observed by the instructor, prove your ability to follow the drill press safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 12.0

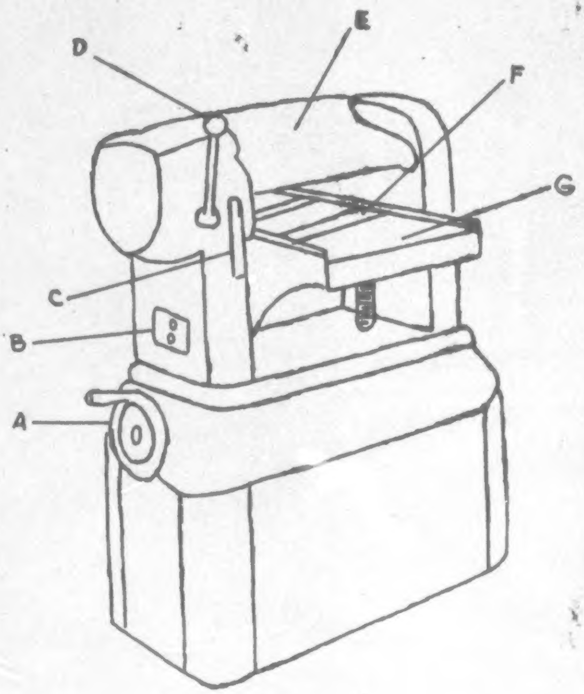
I. P. No.	M/M No.	Method / Media Selection
12.1	12.1.1	Text
		Lecture
		Demonstration
		Diagram handout sheet
12.2	12.2.1	Text
		Handout Sheet
12.3	12.3.1	Handout sheet- safety procedures

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 13.0

PLANER

The learner will, with 80% proficiency, demonstrate in writing and orally, his ability to name the basic parts of the planer and prove through performance the proper and safe operation of the planer.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
13.1	Given a diagram, the learner will, in writing, identify seven (7) parts of the planer. 1. Elevating handwheel 2. Scale 3. Feed control lever 4. Chip breaker 5. Table rolls 6. Table 7. Switch	13.1	In writing, identify seven (7) parts of the planer on the diagram given you by the instructor. 

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 13.0 cont'd.

PLANER

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
13.2	The learner will identify, in writing, the safety rules for the proper operation of the planer from a list supplied by the instructor. 1. Eye protection must be worn. 2. Procure instructor's permission to use machine. 3. Keep table top clean and free of chips. 4. Keep fingers away from underside of board as it is fed into the planer. 5. Don't look into the planer as board passes through. 6. Never plane warped or twisted stock. 7. Never surface too short a board (under 12 inches) 8. Never plane thin stock. 9. Do not make cuts too deep. 10. Only one person is allowed to operate machine at one time. 11. Never leave machine while it is running. 12. Always scrape glue off joints before surfacing. 13. Never stand directly behind board as it is surfaced. 14. Remove all rings and other jewelry. 15. Dress properly, no loose or baggy clothing.	13.2	Identify, in writing, the fifteen (15) safety rules to be observed while operating the planer.
13.3	[illegible] given a list of planer safety procedures, [illegible] his ability to follow these rules.	13.3	You will, as observed by the instructor, prove your ability to follow the planer safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 13.0

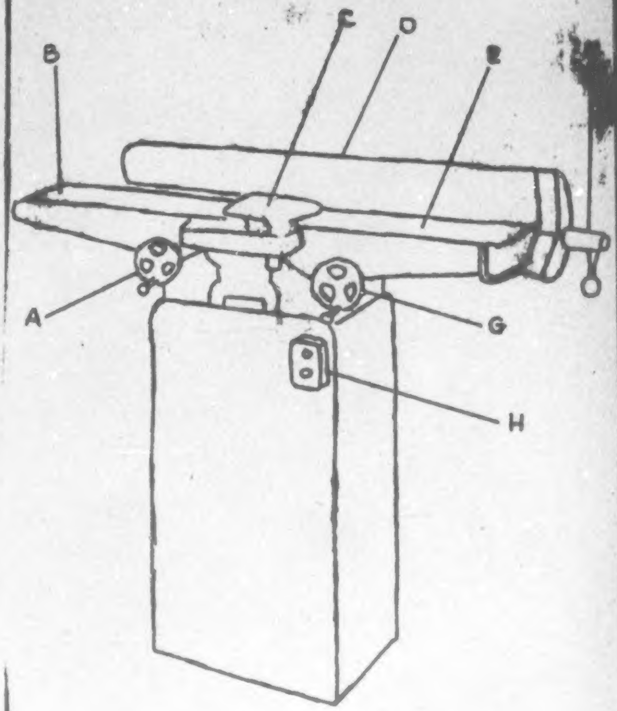
I. P. No.	M/M No.	Method / Media Selection
13.1	13.1.1	Diagram handout sheet
		Lecture
		Text
13.2	13.2.1	Lecture
		Safety handout sheet.
13.3	13.3.1	Lecture
		Observation

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 14.0

JOINTER

The learner will demonstrate, with 80% proficiency, in writing or orally, his ability to name the parts of the jointer and prove through observation and performance, the proper and safe operation of the jointer.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
14.1	Given a diagram, the learner will , in writing, identify eight (8) parts of the jointer. 1. rear table handwheel 2. rear table 3. fence 4. knife guard 5. fence control handle 6. front table 7. front table handwheel 8. switch	14.1	In writing, identify eight (8) parts of the jointer on the diagram given to you by the instructor. 

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 14.0 cont'd. JOINTER

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.2	The learner will identify, in writing, the safety rules for the proper operation and care of the jointer from a list supplied by the instructor. 1. Always keep guard over cutter head. 2. Always work with grain of wood. 3. Eye protection must be worn. 4. Stand to the left of jointer, not behind it. 5. Do not attempt too heavy a cut (not more than 1/8 inch). 6. Don't let fingers extend over the ends of boards. 7. All stock should be free of knots and splits. 8. Do not use jointer if knives are dull. 9. Remove all rings and jewelry. 10. Dress properly, no loose clothing. 11. Keep hands away from the cutting area. 12. Fence must be secure. 13. Use push stick on thin stock. 14. Adjust machine only with the power off 15. Only operator is allowed inside safety zone.	14.2	Identify, in writing, the fifteen (15) safety rules to be observed when operating the jointer.
14.3	The learner, given a list of jointer safety procedures, will demonstrate by observation and practice, his ability to follow these rules correctly.	14.3	You will, as observed by the instructor, prove your ability to follow the jointer safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 14.0

I. P. No.	M/M No.	Method / Media Selection
14.1	14.1.1	Diagram handout Demonstration Text
14.2	14.2.1	Text Lecture Examination Sheet
14.3	14.3.1	Safety handout sheet Lecture

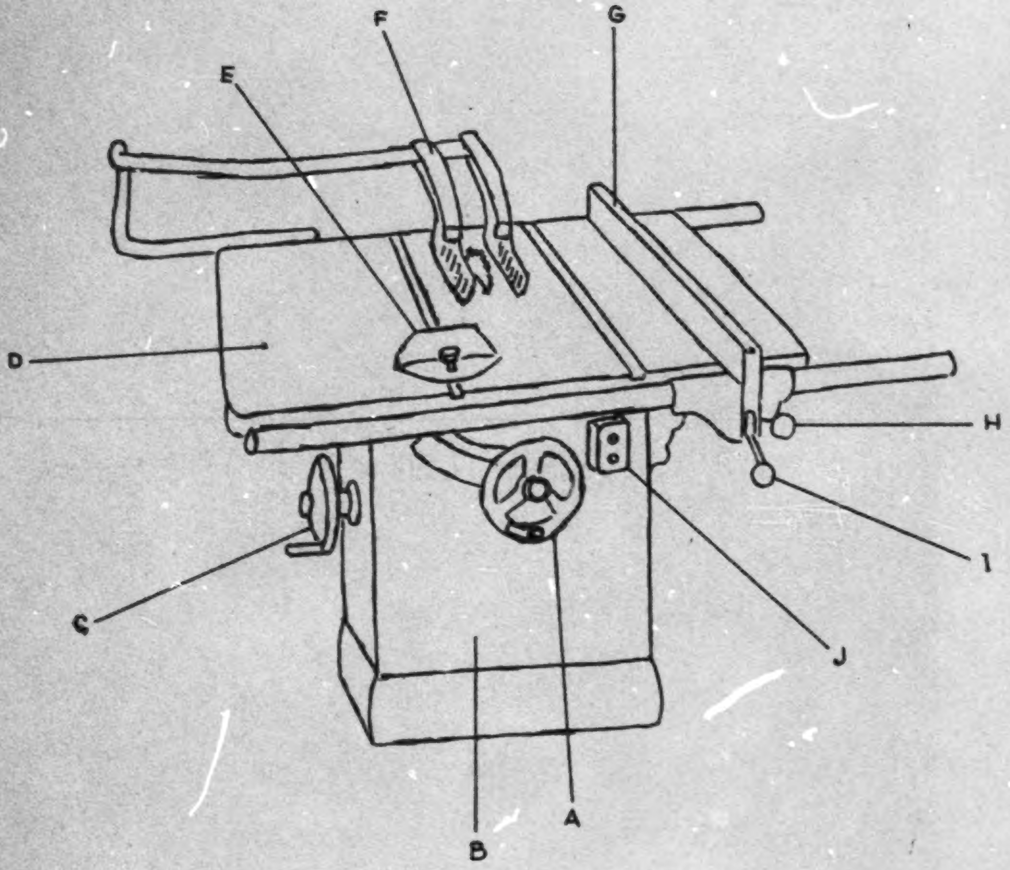
COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 15.0

CIRCULAR SAW

The learner will demonstrate, with 80% proficiency, in writing or orally, his ability to name the parts of the circular saw and prove through observation and performance the proper and safe operation of the saw.

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.1	The learner will, in writing, identify ten (10) parts of the circular saw. 1. elevating handwheels 2. tilting handwheel 3. miter gauge 4. table 5. blade guard 6. fence 7. fence set knob 8. fence clamp handle 9. switch 10. base	15.1	In writing, identify ten (10) parts of the circular saw on the diagram given you by the instructor.(See next page).
5.2	The learner will identify, in writing, the safety rules for the proper operation and care of the circular saw from a list supplied by the instructor. 1. Eye protection must be worn. 2. Guard must be over blade. 3. Saw blade is raised 1/8 to 1/4 above stock and no more. 4. Use push stick when ripping narrow pieces. 5. Keep fingers clear of blade. 6. Do not cut cylindrical stock. 7. Never use fence and miter gauge together. 8. Be sure blade is sharp. 9. Never stand directly behind the blade. 10. Never leave saw until it has come to a complete stop 11. Use either fence or miter gauge when cutting stock. 12. Dress properly 13. Remove rings and other jewelry. 14. Only operator should be inside safety zone. 15. Always obtain permission before using saw.	15.2	Identify, in writing, the fifteen (15) safety rules that will be followed while operating the circular saw.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COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 15.0 cont'd.

CIRCULAR SAW

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
15.3	The learner will identify, orally, three (3) types of circular saw blades and will demonstrate through performance, his knowledge of their use.	15.3	Orally identify three (3) common types of saw blades and demonstrate their use through performance.
15.4	The learner, given a list of circular saw safety procedures, will demonstrate by observation and practice, his ability to follow these rules.	15.4	You will, as observed by the instructor, prove your ability to follow the circular saw safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 15.0

I. P. No.	M/M No.	Method / Media Selection
15.1	15.1.1	Diagram handout Lecture Text
15.2	15.2.1	Text Lecture Examination Sheet
15.3	15.3.1	Text Lecture Blade Samples Equipment Stock
15.4	15.4.1	Safety handout sheet Lecture

COURSE WOODS IA
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 16.0

PORTABLE SANDERS

The learner will demonstrate, with 8[illegible]% proficiency, in writing or orally, his ability to recognize four (4) classifications of portable sanders and prove through observation and performance, the proper and safe operation of the sanders.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
16.1	The learner will, orally, identify the four (4) classifications of portable sanders. 1. Orbit or Reciprocating Pad 2. Belt 3. Disc 4. Drum	16.1	Identify orally, four (4) classifications of portable sanders.
16.2	The learner will identify, in writing, the safety procedures for the proper operation and care of portable sanders. 1. Always secure permission before using sanders. 2. Dress properly, no loose clothing. 3. Remove all rings and other jewelry. 4. Eye protection must be worn. 5. Keep both hands on the handles. 6. Be sure the cord is grounded. 7. Keep the electric cord free so it won't get caught in the sander. 8. Always lift the sander before you start sanding. 9. Do not exert extra pressure on the machine. 10. When finished, do not put sander down until it comes to a complete stop.	16.2	Identify, in writing, the ten (10) safety rules that will be observed when using portable sanders.
16.3	The learner, given a list of portable sander safety procedures, will demonstrate by observation and practice, his ability to follow these rules.	16.3	You will, as observed by the instructor, prove your ability to follow the portable sander safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives - 16.0

I. P. No.	M/M No.	Method / Media Selection
16.1	16.1.1	Text Demonstration Tool Samples
16.2	16.2.1	Text Demonstration Examination Sheet
16.3	16.3.1	Safety handout sheet Text Tools and equipment

WOODS IB

ACCREDITATION NO. 5873 B

LENGTH OF COURSE: 1 SEMESTER

GRADE LEVEL: 9th

PROGRAM PATH: CAREER EDUCATION, PRE-TECHNICAL, PRE-COLLEGE

PREREQUISITE: WOODS IA

COURSE DESCRIPTION:

Basic machine woodworking designed for those students who wish to take an additional semester course in woodworking. A review of machines and tools with more depth in design and construction and a criteria for making a vocational choice.

WOODS IB

1.0 Orientation

2.0 Safety

3.0 Occupations

4.0 Kinds and Uses of Woods

5.0 Hand Tools

6.0 Wood Joints

7.0 Fastening and Assembly

8.0 Finishes and Finishing

9.0 Planning

10.0 Design

11.0 Scroll Saw

12.0 Drill Press

13.0 Wood Lathe

14.0 Planer

15.0 Jointer

16.0 Circular Saw

17.0 Bandsaw

18.0 Portable Sanders

19.0 Router

20.0 Grinder

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 1.0 ORIENTATION

The learner will demonstrate, by practice and examination, his ability to understand the responsibilities expected of him in the woods laboratory and the areas in which he will be evaluated. A proficiency of 80% is expected of the learner.

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
.1	The learner will define, in writing, the laboratory responsibilities expected of him in woodworking. 1. Punctuality 2. Citizenship 3. Safety 4. Attitude 5. Behavior 6. Good Housekeeping	1.1	List, in writing, the six (6) areas of responsibility that will be followed when working in the woods laboratory.
1.2	The learner will demonstrate, orally, his ability to comprehend the areas that he will be evaluated in and the percentages assigned to each. 1. Projects .... 40% 2. Tests .... 20% 3. Notebook .... 20% 4. Daily Performance and Attitude 20%	1.2	Orally demonstrate to the instructor your ability to understand the areas in which you will be graded.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 1.0

I. P. No.	M/M No.	Method / Media Selection
1.1	1.1.1	Lecture Chalkboard
1.2	1.2.1	Lecture Chalkboard

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE OBJECTIVE NO. 2.0

SAFETY (GENERAL)

The learner will demonstrate, by practice and examination, his ability to understand proper safety procedures in the woods laboratory, with a proficiency of 100%.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.1	The learner will identify in writing the proper general safety procedures used in the woodworking laboratory from a list provided by the instructor. 1. Report immediately to your work station 2. Respect the rights of others in your class 3. Accept your share of responsibility 4. Report damaged or missing tools to your instructor. 5. Follow instructions 6. Be courteous to classmates 7. Obtain permission prior to using tools, machines, or materials 8. Report all accidents, no matter how slight 9. Know and follow proper fire rules and regulations 10. Wear eye protection when using machines 11. Keep tools sharp and in good working order 12. No horseplay in the laboratory 13. Dress properly - no loose clothing 14. Remove all jewelry 15. Select proper size and type of tool for the job 16. Keep your work area clean and in order	2.1	Identify, in writing, the twenty (20) general safety procedures that will be followed while working in the woodworking laboratory.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 2.0 cont'd.

SAFETY (GENERAL)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
	17. Lift heavy objects with your leg muscles to avoid back and stomach injuries 18. Store and stack materials carefully 19. Keep hands clean and free of oil or grease 20. Check portable electric tools for bad cords, plugs, or switches		
2.2	The learner, given a list of general safety procedures, will demonstrate, by daily actions, his ability to follow these procedures.	2.2	You will demonstrate, by daily actions, your ability to follow the general safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 2.0

I. P. No.	M/M No.	Method / Media Selection
2.1	2.1.1	Lecture Handout Sheet
2.2	2.2.1	Handout Sheet

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 3.0 OCCUPATIONS

The learner will demonstrate in writing, with a proficiency of 80%, his ability to comprehend various occupational opportunities available in the wood or related woods industry.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	The learner will identify, in writing, four (4) skilled occupations of the wood industry. 1. Cabinet maker 2. Millman 3. Finish Carpenter 4. Wood pattern maker	3.1	List four (4) skilled occupations of the wood industry.
3.2	The learner will write a research paper, of two-hundred (200) words, on the advantages and disadvantages of one of the skilled occupations in the wood industry.	3.2	From your listing of skilled occupations in the wood industry, use textbooks or other media material available to write a two-hundred (200) word paper on one of these occupations and include the advantages and disadvantages of the occupation.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 3.0

I. P. No.	M/M No.	Method / Media Selection
3.1	3.1.1	Lecture
		Film
3.2	3.2.1	Lecture
		Film

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 4.0 KINDS & USES OF WOODS

The learner will, with 80% proficiency, in writing or orally, identify commonly used woods and demonstrate his knowledge of the different characteristics of each.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
.1	The learner, in writing, will identify samples of eight (8) commonly used woods in the woodworking laboratory. 1. Walnut 2. Mahogany 3. Poplar 4. Maple 5. Oak 6. Pine 7. Cherry 8. Pecan	4.1	Properly identifying, in writing, the common names of the wood samples displayed by the instructor.
.2	The learner will identify, in writing, the working qualities of the eight (8) common used woods previously listed.	4.2	From the list of eight (8) commonly used woods, identify, in writing, the working qualities of each as to hard or soft.
4.3	The learner will on paper, give a description of the manufacturing process of plywood.	4.3	Using your text or other media material, write a two-hundred-fifty (250) word description of the manufacturing process of plywood.
4.4	The learner will demonstrate in writing, his ability to name four (4) by-products of the wood industry. 1. Paper 2. Alcohol 3. Cellulose 4. Wall Board	4.4	Using your text or other media material, write a short paragraph on four (4) wood by-products.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective: 4.0

I. P. No.	M/M No.	Method / Media Selection
4.1	4.1.1	Lecture Text Samples
4.2	4.2.1	Lecture Text
4.3	4.3.1	Lecture Text Film
4.4	4.4.1	Lecture Text Film

COURSE WOODS IB

9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0

HANDTOOLS

The learner will demonstrate his ability to identify the proper name, safe use, and care of the common handtools used in the woodworking laboratory with a proficiency of 80%.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.1	The learner will identify, in writing, the correct name of thirty-five (35) handtools used in woodworking. 1. hand crosscut saw 2. hand rip saw 3. back saw 4. dovetail saw 5. keyhole saw 6. compass saw 7. coping saw 8. miter saw 9. wood mallet 10. claw hammer 11. sliding "T" bevel 12. screwdriver (standard tip) 13. block plane 14. smooth plane 15. try square 16. framing square 17. wood chisel 18. wood rasp 19. cabinet file 20. hand drill 21. brace 22. twist drill 23. auger bit 24. spoke shave 25. draw knife 26. cabinet scraper 27. doweling jig 28. plug cutter 29. screwdriver bit 30. countersink bit 31. bench rule 32. marking gauge 33. file card 34. scratch awl 35. nail set	5.1	Correctly identify, in writing, the proper name of the tools as displayed by the instructor.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 5.0 cont'd.

HANDTOOLS

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.2	The learner, through performance, will demonstrate his ability to safely use and care for the handtools necessary in the construction of a project.	5.2	Demonstrate to the instructor, by performance, your ability to safely use and care for handtools.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 5.0

I. P. No.	M/M No.	Method / Media Selection
5.1	5.1.1	Text Tools
5.2	5.2.1	Lecture

COURSE **WOODS IB**
9th Grade

TERMINAL PERFORMANCE OBJECTIVE NO. 6.0

WOOD JOINTS

With a proficiency of 80%, the learner will correctly identify ten (10) wood joints, tell their use, and construct a project incorporating two (2) or more of these joints.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
6.1	From a list and pictures supplied by the instructor, the learner will correctly match the list to the pictures.	6.1	Match the proper name to the illustrated joint. 1. Butt 2. Dado 3. Dowell 4. Rabbet 5. Miter 6. Dovetail 7. Blind Dado 8. Mortise and Tension 9. Lap 10. Edge

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0 cont'd.

WOOD JOINTS

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
.2	Given a list of the preceeding ten (10) joints, the learner will write a use for eight (8) of them.	6.2	From the given list, write a use for any eight (8) wood joints.
.3	The learner will construct a project incorporating two (2) or more of the preceeding ten (10) given wood joints.	6.3	Construct a project using two (2) or more wood joints.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 6.0 cont'd. WOOD JOINTS

O.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		6.3	

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 6.0

I. P. No.	M/M No.	Method / Media Selection
6.1	6.1.1	Lecture
		Handout Sheet
		Film
6.2	6.2.1	Lecture
		Handout Sheet
6.3	6.3.1	Tools
		Materials
		Demonstration

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0

FASTENING AND ASSEMBLY

With a proficiency of 80%, the learner will identify in writing or orally, different fastening hardware, adhesive, and clamping devises used in the woodworking laboratory.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.1	The learner will identify, orally, the three (3) common head shapes of wood screws. 1. Flathead 2. Roundhead 3. Oval head	7.1	Orally identify the correct name of the following wood screws.
7.2	The learner will identify, orally, six (6) standard types of nails. 1. Common 2. Box 3. Casing 4. Finishing 5. Brad 6. Roofing	7.2	Orally identify the six (6) standard types of nails on the diagram sheet handed you by the instructor.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0 cont'd.

FASTENING AND ASSEMBLY

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.3	The learner will identify, by written examination, four (4) common types of wood glues. 1. Polyvinyl Resin 2. Contact 3. Plastic Resin 4. Resorcinol Resin	7.3	Match the number and letter from columns two (2) and three (3) to column one. Polyvinyl Resin 1. Mix powder and water A. Plastic Laminating. Contact 2. Mix two components B. Moisture Resistan Plastic Resin 3. Ready to use C. Waterproof Resorcinol 4. Flammable D. Sets rapidly, Dries clear
7.4	The learner will orally identify the following six (6) types of wood clamping devises as illustrated on a handout sheet. 1. Bar clamp 2. Wood handscrew 3. "C" clamp 4. Pipe clamp 5. Webbing clamp 6. Miter clamp	7.4	Orally identify the correct names of the following six (6) types of wood clamping devises as shown on the attached sheet.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0 cont'd.

FASTENING AND ASSEMBLY

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		7.4	

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 7.0

I. P. No.	M/M No.	Method / Media Selection
7.1	7.1.1	Lecture Text Wood Screw Samples
7.2	7.2.1	Handout Sheet Lectures Samples
7.3	7.3.1	Text Examination Sheet Lecture
7.4	7.4.1	Lecture Tool Samples Handout Sheet

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 8.0

FINISHING AND FINISHES

With 80% proficiency, the learner will orally state five (5) major steps in finishing, identify four (4) materials and their solvents, identify three (3) common types of abrasive materials and their origin, and apply a suitable finish to a wood project.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
8.1	The learner will orally state five (5) major steps in finishing a woodwork project. 1. Sand - smooth surface 2. Stain - adding color 3. Seal - prevent color bleeding 4. Fill - closing the grain 5. Finish - project and beautify	8.1	Orally state and define, in order, five (5) major steps in finishing a wood project.
8.2	The learner will, in writing, identify the three (3) most common types of abrasive materials and their origin. 1. Flint (natural) 2. Garnet (natural) 3. ALuminum (manufactured)	8.2	Identify, in writing, the three (3) most common abrasive materials used on woods and tell their origin. (Natural or manufactured).
8.3	The learner will orally identify four (4) finishing materials and the correct solvent for each. 1. Varnish - turpentine 2. Lacquer - lacquer thinner 3. Shellac - denatured alcohol 4. Penetrating- mineral spirits	8.3	Orally identify four (4) finishing materials and their proper solvent.
8.4	The learner will apply a selected finish to wood and demonstrate his ability to clean and care for the tools and materials involved.	8.4	Apply the proper desired finish to your wood and demonstrate by performance, your ability to clean and store the tools and materials involved.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 8.0

I. P. No.	M/M No.	Method / Media Selection
8.1	8.1.1	Lecture
		Demonstration
		Tool
		Materials
8.2	8.2.1	Lecture
		Text
		Film
		Samples
8.3	8.3.1	Lecture
		Text
8.4	8.4.1	Tools
		Materials
		Demonstration

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 9.0 PLANNING

The learner will, with 80% proficiency, interpret and follow the correct procedures for completing a project plan sheet. This sheet will include bill of materials, plan of procedures, and tools and machines required.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
9.1	From a sketch or drawing, the learner will compute a number of board feet necessary to construct his project using the following formula: $BF = \frac{\text{No. Pcs.} \times T \times W \times L}{1 \times 12 \times 12}$	9.1	With a sketch or drawing of your project, compute the number of board feet needed to construct your project.
9.2	The learner will complete the bill of materials section of the plan sheet. (See attachment).	9.2	On the plan sheet, complete the section on bill of materials including number of pieces, sizes, board feet, and cost.
9.3	The learner will complete the plan of procedure section of the plan sheet.	9.3	On the plan of procedure section of the plan sheet, complete in chronological order the steps necessary to construct your project.
9.4	The learner will complete the tools and machines section of the plan sheet.	9.4	List, in order of the plan of procedure, the tools and machines necessary to construct your project.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 9.0

I. P. No.	M/M No.	Method / Media Selection
9.1	9.1.1	Lecture Chalkboard Text
9.2	9.2.1	Lecture Handout Sheet
9.3	9.3.1	Lecture Handout Sheet
9.4	9.4.1	Lecture Handout Sheet

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 10.0

DESIGN

The learner will demonstrate, by practice and examination, his ability to understand and follow proper design procedures in woods, with a proficiency of 75%.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
10.1	The learner will state and define, orally, four (4) fundamentals of good design in woodworking. 1. Function - what will it be used for? Function determines form. 2. Appearance - it must be pleasant to the user. 3. Materials - the proper type of wood for use and style. 4. Construction - logical construction for function, durability, and economy.	10.1	Correctly state and define (orally) four (4) fundamentals of design in woodworking.
10.2	The learner will orally state and define five (5) elements of good design. 1. Line - straight, curved, S-shaped, and circular. 2. Shape - square, round, rectangular, and triangular. 3. Color - to add interest (stains, paints, enamels). 4. Solid shape or mass - three (3) dimensional shape or combination of shapes. 5. Tone and Texture - add to surface design.	10.2	Correctly state and define, orally, five (5) elements of good design.
		10.3	

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 10.0 cont'd. DESIGN

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
10.3	The learner will orally state and define five (5) common principles of design. 1. Proportion - ratio of one part to another. Example: Gold mean rectangle (2-3, 3-5, 5-8) 2. Balance - two form; formal (symmetrical) and informal (asymmetrical). 3. Rythm - repetition of shape, color, line, or design details. 4. Harmony or Unity - the way different parts go together. 5. Emphasis - focusing on a point of attraction or special interest.	10.3	Orally state and define five (5) common principles of design.
10.4	The learner, through performance, will demonstrate his ability to incorporate proper design procedures into a wood project.	10.4	Follow proper design procedures by designing or redesigning a project approved by the instructor.

METHOD / MEDIA ANALYSIS

Terminal Performance Objectives 10.0

I. P. No.	M/M No.	Method / Media Selection
10.1	10.1.1	Lecture Text Handout sheet
10.2	10.2.1	Film Text Lecture Handout sheet
10.3	10.3.1	Lecture Text
10.4	10.4.1	Text Materials Demonstration

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0

SCROLL SAW

The learner, with 80% proficiency, will demonstrate in writing or orally, his ability to name parts of the scroll saw and prove through observation and performance, proper and safe operation of the saw.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
11.1	Given a diagram, the learner will, in writing, identify ten (10) parts of the scroll saw. 1. overarm 2. motor 3. table 4. belt guard 5. hold down 6. guide post 7. base 8. chuck 9. tension sleeve 10. table insert	11.1	Identify, in writing, ten (10) parts of the scroll saw from the diagram given you by the instructor.
11.2	The learner will identify, in writing, the proper safety rules of the scroll saw from a list provided by the instructor. 1. Remove rings and other jewelry 2. Hold down spring should be on the top of the stock 3. Wear eye protection at all times 4. Stand clear when turning on saw 5. Only operator starts and stops machine	11.2	Identify, in writing, the ten (10) safety rules to follow when operating a scroll saw.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 11.0 cont'd.

SCROLL SAW

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
11.2	6. Hand holding stock should be to the sides of the blade. 7. Turn off machine to remove small scraps of wood. 8. Machine should never be left running when not in use. 9. Only operator should be inside safety zone. 10. Obtain instructor's permission prior to operating saw.		
11.3	The learner, given a list of scroll saw safety procedures, will demonstrate, by observation and practice, his ability to follow these rules correctly.	11.3	You will, as observed by the instructor, prove your ability to follow the scroll saw safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective: 11.0

I. P. No.	M/M No.	Method / Media Selection
11.1	11.1.1	Handout Sheet
		Lecture
		Text
		Examination Sheet
11.2	11.2.1	Handout Sheet
		Demonstration
		Tools and Materials
		Examination Sheet
11.3	11.3.1	Handout Sheet
		Observation

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 12.0 DRILL PRESS

The learner will, with 80% proficiency, demonstrate in writing or orally, his ability to name the parts of the drill press and further prove through observation and performance, proper and safe operation of the drill press.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
12.1	Given a diagram, the learner will identify, in writing, ten (10) parts of the drill press. 1. base 2. column 3. table 4. chuck 5. quill 6. depth stop 7. motor 8. feed handle 9. switch 10. belt guard	12.1	Identify, in writing, ten (10) parts of the drill press on the diagram given you by the instructor.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 12.0 cont'd.

DRILL PRESS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
12.2	The learner will identify, in writing, the proper safety rules for the operation of the drill press from a list supplied by the instructor. 1. Small pieces of stock should be held securely. 2. Use correct drill or bit for the job. 3. Be certain the drill is locked in the chuck. 4. Always remove chuck key immediately from the chuck. 5. Table should be cleaned with a brush when machine has stopped. 6. No adjustments will be made with machine running 7. Keep hands away from revolving parts. 8. Only the operator will start or stop the machine 9. Eye protection must be worn at all times. 10. Do not stand too close to the machine; hair or loose clothing can get caught in revolving parts.	12.2	Identify in writing, the ten (10) safety rules to follow when operating the drill press.
12.3	The learner, given a list of the drill press safety procedures will demonstrate by observation and practice, his ability to follow these procedures.	12.3	You will, as observed by the instructor, prove your ability to follow the drill press safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 12.0

I. P. No.	M/M No.	Method / Media Selection
12.1	12.1.1	Handout Sheet Demonstration Examination Sheet
12.2	12.2.1	Handout Sheet Demonstration Tools Materials Examination Sheet
12.3	12.3.1	Handout Sheet Tools Materials Observation

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 13.0

WOOD LATHE

The learner will, with 80% proficiency, demonstrate in writing or orally, his ability to name the parts of the wood lathe, five (5) basic cutting tools for the lathe, and demonstrate by performance the proper and safe operation of the wood lathe.

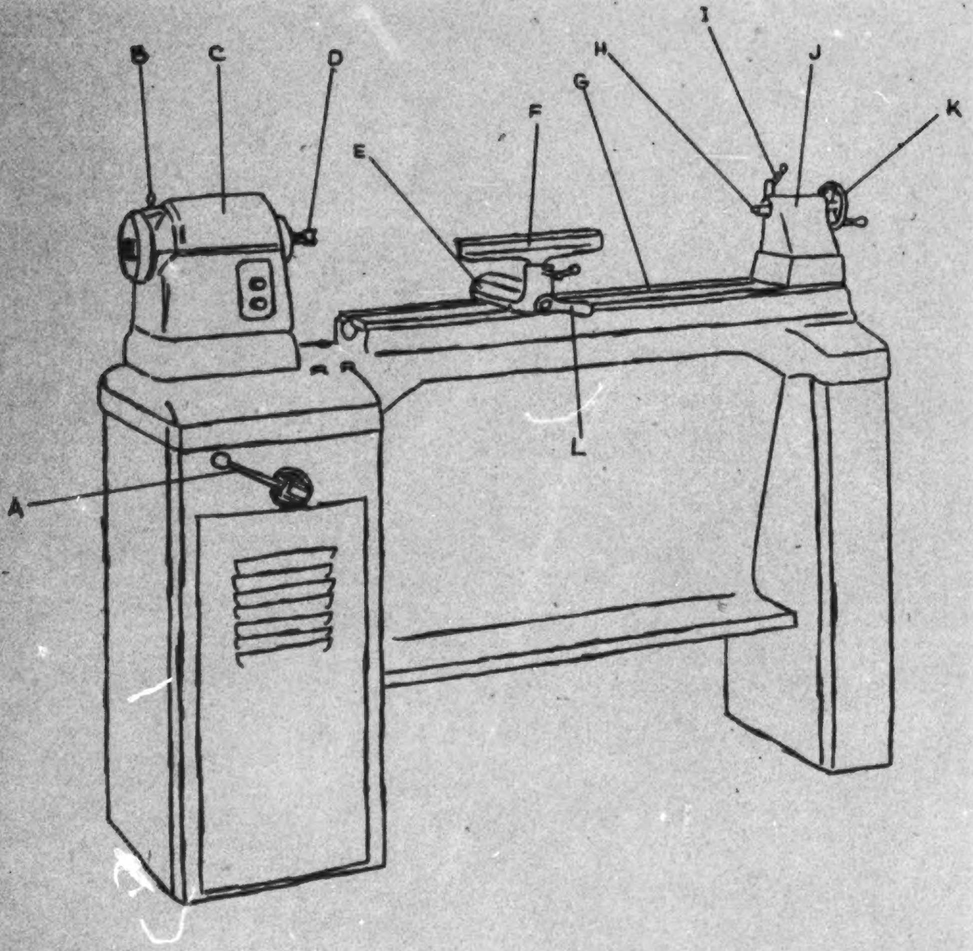
NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
13.1	Given a diagram, the learner will identify twelve (12) parts of the wood lathe. 1. headstock 2. index pin 3. tool rest base 4. tool rest 5. lathe bed 6. speed control lever 7. tail stock 8. tail stock spindle clamp 9. tail stock handwheel 10. drive center 11. dead center 12. tool rest base lever	13.1	Identify, in writing, twelve (12) parts of the wood lathe on the diagram given you by your instructor. (See attached sheet).
13.2	The learner will identify, in writing, the proper safety rules for the operation of the wood lathe. 1. Roll up sleeves and secure all loose clothing. 2. Remove all rings and other jewelry. 3. Use correct spindle speed. 4. Be sure tools are sharp. 5. Get instructor's permission before turning on machine. 6. Eye protection must be worn. 7. Keep tool rest close to work. 8. Mount all stock securely. 9. Only operator can start or stop the machine. 10. Only operator is permitted inside yellow safety zone. 11. Hold tools firmly. 12. Remove tool rest before sanding	13.2	Identify in writing the fifteen (15) safety rules that will be followed while operating the wood lathe.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 13.0 cont'd.

WOOD LATHE

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
13.2	13. Do not turn wood with knots or splits. 14. Make no adjustments while machine is running. 15. Stand clear when turning on the wood lathe.		
13.3	The learner will identify in writing the correct name for the five (5) basic wood lathe tools. 1. gouge 2. skew 3. roundnose 4. spear point 5. parting point	13.3	Orally identify the proper names of the five (5) wood lathe tools displayed by the instructor.
13.4	The learner, given a list of wood lathe safety procedures, will demonstrate by observation and practice, his ability to follow these rules correctly.	13.4	You will, as observed by the instructor, prove your ability to follow the wood lathe safety procedures.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METHOD / MEDIA ANALYSIS

Terminal Performance Objective 13.0

L. P. No.	M/M No.	Method / Media Selection
13.1	13.1.1	Lecture
		Demonstration
		Film
		Text
		Handout Sheet
13.2	13.2.1	Lecture
		Handout Sheet
13.3	13.3.1	Demonstration
		Tools
13.4	13.4.1	Lecture
		Observation
		Handout safety sheet

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 14.0

JOINTER

The learner will demonstrate, with 80% proficiency, in writing or orally, his ability to name the parts of the jointer and prove through observation and performance, the proper and safe operation of the jointer.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
14.1	Given a diagram, the learner will, in writing, identify eight (8) parts of the jointer. 1. rear table handwheel 2. rear table 3. fence 4. knife guard 5. fence control handle 6. front table 7. front table handwheel 8. switch	14.1	In writing, identify eight (8) parts of the jointer on the diagram given to you by the instructor.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 14.0 cont'd. JOINTER

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
14.2	The learner will identify, in writing, the safety rules for the proper operation and care of the jointer from a list supplied by the instructor. 1. Always keep guard over cutter head. 2. Always work with grain of wood. 3. Eye protection must be worn. 4. Stand to the left of jointer, not behind it. 5. Do not attempt too heavy a cut (Not more than 1/8 inch). 6. Don't let fingers extend over the ends of boards. 7. All stock should be free of knots and splits. 8. Do not use jointer if knives are dull . 9. Remove all rings and jewelry. 10. Dress properly, no loose clothing. 11. Keep hands away from the cutting area. 12. Fence must be secure. 13. Use push stick on thin stock. 14. Adjust machine only with the power off. 15. Only operator is allowed inside safety zone.	14.2	Identify, in writing, the fifteen (15) safety rules to be observed when operating the jointer.
14.3	The learner, given a list of jointer safety procedures, will demonstrate by observation and practice, his ability to follow these rules correctly.	14.3	You will, as observed by the instructor, prove your ability to follow the jointer safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 14.0

L. P. No.	M/M No.	Method / Media Selection
14.1	14.1.1	Handout Sheet
		Text
		Tools and Equipment
		Examination Sheet
14.2	14.2.1	Handout Sheet
		Text
		Examination Sheet
		Tools and Materials
14.3	14.3.1	Handout Sheet
		Observation

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 15.0

CIRCULAR SAW

The learner will demonstrate, with 80% proficiency, in writing or orally, his ability to name the parts of the circular saw and prove through observation and performance the proper and safe operation of the saw.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
15.1	The learner will, in writing, identify ten (10) parts of the circular saw. 1. elevating handwheels 2. tilting handwheel 3. miter gauge 4. table 5. blade guard 6. fence 7. fence set knob 8. fence clamp handle 9. switch 10. base	15.1	In writing, identify ten (10) parts of the circular saw on the diagram given you by the instructor. (See next page).
15.2	The learner will identify, in writing, the safety rules for the proper operation and care of the circular saw from a list supplied by the instructor. 1. Eye protection must be worn. 2. Guard must be over blade. 3. Saw blade is raised 1/8 to 1/4 above stock and no more. 4. Use push stick when ripping narrow pieces. 5. Keep fingers clear of blade. 6. Do not cut cylindrical stock. 7. Never use fence and miter gauge together. 8. Be sure blade is sharp. 9. Never stand directly behind the blade. 10. Never leave saw until it has come to a complete stop. 11. Use either fence or miter gauge when cutting stock. 12. Dress properly. 13. Remove rings and other jewelry. 14. Only operator should be inside safety zone. 15. Always obtain permission before using saw.	15.2	Identify, in writing, the fifteen (15) safety rules that will be followed while operating the circular saw.

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 15.0 cont'd.

CIRCULAR SAW

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
15.3	The learner will identify, orally, three (3) types of circular saw blades and will demonstrate through performance, his knowledge of their use.	15.3	Orally identify three(3) common types of saw blades and demonstrate their use through performance.
15.4	The learner, given a list of circular saw safety procedures, will demonstrate by observation and practice, his ability to follow these rules.	15.4	You will, as observed by the instructor, prove your ability to follow the circular saw safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 15.0

I. P. No.	M/M No.	Method / Media Selection
15.1	15.1.1	Handout Sheet
		Text
		Tools and Equipment
		Examination Sheet
15.2	15.2.1	Handout Sheet
		Text
		Examination Sheet
15.3	15.3.1	Handout Sheet
		Observation

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 16.0

PORTABLE SANDERS

The learner will demonstrate, with 80% proficiency, in writing or orally, his ability to recognize four (4) classifications of portable sanders and prove through observation and performance, the proper and safe operation of the sanders.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
16.1	The learner will, orally, identify the four (4) classifications of portable sanders. 1. Orbit or Reciprocating Pad 2. Belt 3. Disc 4. Drum	16.1	Identify orally, four (4) classifications of portable sanders.
16.2	The learner will identify, in writing, the safety procedures for the proper operation and care of portable sanders. 1. Always secure permission before using sanders. 2. Dress properly, no loose clothing. 3. Remove all rings and other jewelry. 4. Eye protection must be worn. 5. Keep both hands on the handles. 6. Be sure the cord is grounded. 7. Keep the electric cord free so it won't get caught in the sander. 8. Always lift the sander before you start sanding. 9. Do not exert extra pressure on the machine. 10. When finished, do not put sander down until it comes to a complete stop.	16.2	Identify, in writing, the ten (10) safety rules that will be observed when using portable sanders.
16.3	The learner, given a list of portable sander safety procedures, will demonstrate by observation and practice, his ability to follow these rules.	16.3	You will, as observed by the instructor, prove your ability to follow the portable sander safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 16.0

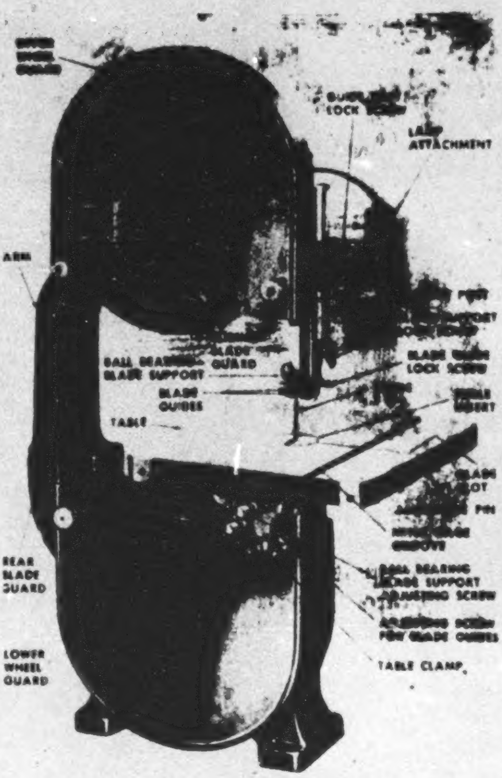
I. P. No.	M/M No.	Method / Media Selection
16.1	16.1.1	Handout Sheet
		Text
		Tools and Equipment
		Examination
16.2	16.2.1	Handout Sheet
		Text
		Tools and Materials
		Examination Sheet
16.3	16.3.1	Text
		Tools and Equipment
		Observation
16.4	16.4.1	Handout Sheet
		Examination Sheet
		Tools and Materials

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 17.0

BANDSAW

[redacted] his ability to name [redacted] and safe operation [redacted]

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
17.1	The learner will, in writing, identify ten (10) parts of the bandsaw. 1. Table 2. Upper Wheel Guard 3. Lower Wheel Guard 4. Guide Post 5. Table Insert 6. Miter Gauge Groove 7. Guide Post Lock 8. Blade Guides 9. Blade Support 10. Table Clamp	17.1	Identify, in writing, ten (10) parts of the bandsaw on the diagram supplied by the instructor.  LOCK SCREW ATTACHMENT ARM BLADE GUARD BALL BEARING BLADE SUPPORT BLADE GUIDES TABLE BLADE GUIDE LOCK SCREW TABLE INSERT BALL BEARING BLADE SUPPORT ADJUSTING SCREW ADJUSTING SCREW FOR BLADE GUIDES TABLE CLAMP REAR BLADE GUARD LOWER WHEEL GUARD

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 17.0 cont'd.

BANDSAW

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
17.2	The learner will identify, in writing, the safety rules for the proper operation and care of the bandsaw. 1. Eye protection must be worn. 2. Adjust upper guide 1/4 above stock. 3. Keep stock flat on table. 4. Keep hands at least three (3) inches from blade. 5. Remove rings and other jewelry. 6. Dress properly - no loose clothing. 7. Do not use dull blades. 8. Stop machine if the blade or work binds. 9. Cylindrical stock should be secured in a holding device. 10. Do not clean table with machine running.	17.2	Identify, in writing, the ten (10) safety rules that will be followed while operating the bandsaw.
7.3	The learner, given a list of bandsaw safety procedures, will demonstrate by performance, his ability to follow these rules.	17.3	You will, as observed by the instructor, prove your ability to follow the bandsaw safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 17.0

I. P. No.	M/M No.	Method / Media Selection
17.1	17.1.1	Lecture
		Demonstration
		Handout Sheet
		Examination Sheet
17.2	17.2.1	Text
		Handout Sheet
		Examination Sheet
17.3	17.3.1	Handout Sheet
		Observation

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 18.0

MACHINE SANDERS

The learner will, with 80% proficiency, be familiar with the safety considerations and the various uses of the portable belt and portable finishing sanders.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
18.1	The learner will, on a written examination, list ten (10) safety rules that apply to the portable sander.	18.1	List ten (10) safety rules that apply to the safe operation of the portable sander.
18.2	The learner, on a written examination, will identify the various types of portable sanders available in the woodworking laboratory.	18.2	Identifu, by name, the different types of machine sanders as displayed by the instructor.
18.3	The learner will be familiar with the uses (applications) of the various portable sanders as demonstrated on a written examination.	18.3	1. The ____________ ____________ is an excellent machine for sanding assembled cabinet work. 2. The __________-__________ action finishing sander is ideal for very fine finishing. 3. The ________________ action finishing sander is ideal for rapid sanding.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 18.0

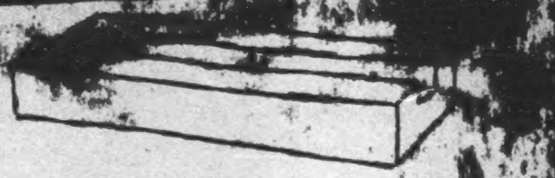
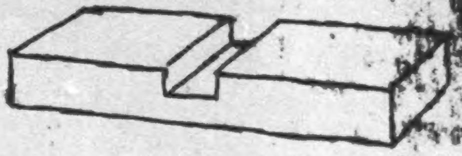
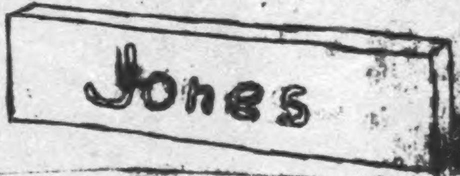
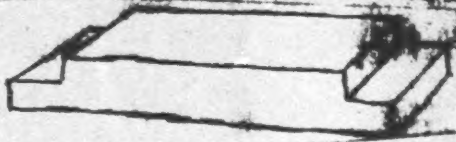
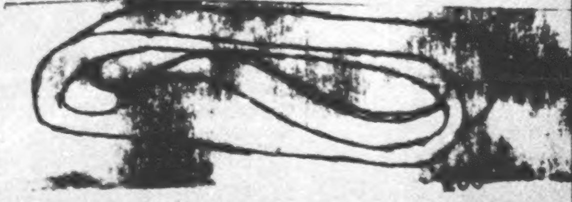
I. P. No.	M/M No.	Method / Media Selection
18.1	18.1.1	Text Lecture
18.2	18.2.1	Lecture Text Examination Sheet
18.3	18.3.1	Handout Sheet Tools and Materials Observation

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 19.0

ROUTERS

The learner will demonstrate, with 90% proficiency, in writing or orally, his ability to recognize six (6) common cuts performed with the router, four (4) basic bits, and prove through performance the proper and safe operation of the router.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
19.1	The learner will, in writing, identify six (6) common cuts that can be performed with the router. 1. groove 2. dado 3. freehand 4. rabbet 5. edge shaping 6. internal	19.1	[illegible]     
19.2	The learner will identify, in writing, the safety procedures for the proper operation and care of routers. 1. Always get permission. 2. Remove all rings and other jewelry. 3. Eye protection must be worn. 4. Dress properly - no loose clothing. 5. Keep both hands on the handle. 6. Electrical connection must be grounded. 7. All bits and cutters must be sharp. 8. Maintain a well balanced position on both feet. 9. Do not lay router down until it has come to a complete stop. 10. Disconnect electrical connection when changing bits, cutters, or attachments.		

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 19.0 cont'd.

ROUTERS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
19.3	The learner will identify, orally, four (4) common router bits. 1. straight 2. corner rounding 3, beading 4. cove	19.3	Identify orally four (4) common router bits displayed by the instructor.
9.4	The learner, given a list of router safety procedures, will demonstrate his ability to follow these rules.	19.4	You will, as observed by the instructor, prove your ability to follow the router safety procedures.

METHOD / MEDIA ANALYSIS

Terminal Performance Objective 19.0

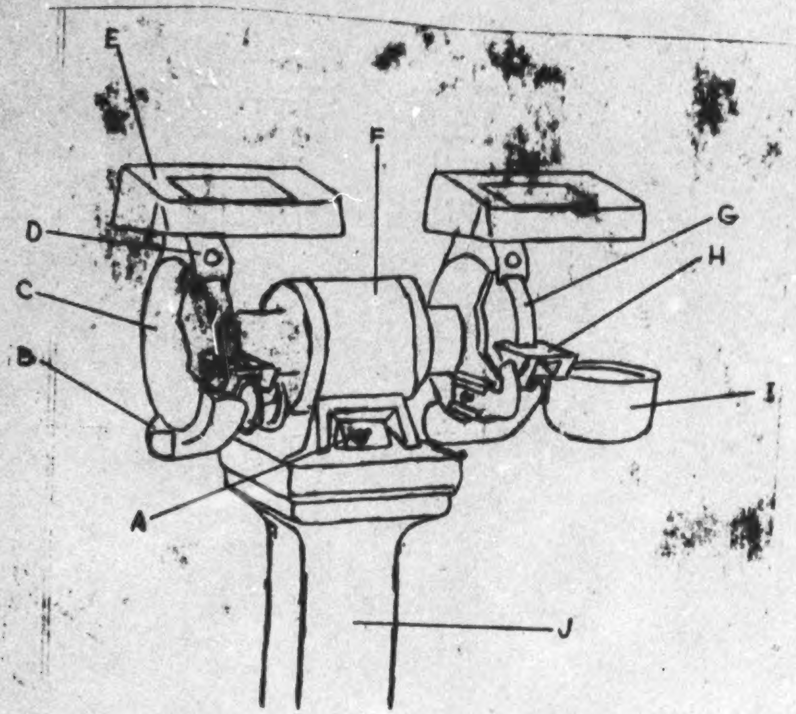
I. P. No.	M/M No.	Method / Media Selection
19.1	19.1.1	Lecture
		Handout Sheet
		Text
19.2	19.2.1	Text
		Handout Sheet
		Examination
19.3	19.3.1	Demonstration
		Tools
19.4	19.4.1	Handout Sheet
		Observation

COURSE WOODS IB
9th Grade

TERMINAL PERFORMANCE
OBJECTIVE NO. 20.0 GRINDER

The learner will demonstrate, in writing, with 90% proficiency, his ability to name the parts of the grinder and prove through observation and performance, proper and safe operation of the equipment.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
20.1	The learner will, in writing, identify ten (10) parts of the grinder. 1. Safety Shield 2. Water Pot 3. Motor 4. Switch 5. Tool Rest 6. Dust Shute 7. Pedestal 8. Wheel Guard 9. Spark Deflector 10. Grinding Wheel	20.1	Identify, in writing, ten (10) parts of the grinder on the diagram supplied by the instructor. (See attached sheet).
20.2	The learner will identify, in writing, the safety rules for the proper operation and care of the grinder. 1. Eye protection must be worn. 2. Keep all hoods and guards in place. 3. Hold all work securely. 4. Dress properly - no loose clothing. 5. Don't touch the moving wheel or the work being ground. 6. Keep tool rest adjusted 1/8 from wheel. 7. Grind only on face of wheel, never on side. 8. Keep object being ground cool by dipping in water. 9. Never use grinder with chipped or cracked wheel. Replace or dress wheel. 10. Stand aside when turning on machine.	20.2	Identify, in writing, the ten (10) safety rules that will be followed while operating the grinder.
20.3	The learner, given a list of grinder safety procedures, will demonstrate his ability to follow these rules.	20.3	You will, as observed by the instructor, prove your ability to follow the grinder safety procedures.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METHOD / MEDIA ANALYSIS

Terminal Performance Objective 20.0

I. P. No.	M/M No.	Method / Media Selection
20.1	20.1.1	Lecture
		Text
		Handout Sheet
20.2	20.2.1	Lecture
		Handout Sheet
		Examination Sheet
20.3	20.3.1	Lecture
		Observation